Lectures
ON
MOLECULAR PHYSIOLOGY, PATHOLOGY, AND THERAPEUTICS,
AND THEIR
APPLICATION TO THE TREATMENT OF DISEASE.

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LECTURE V.

GENERAL VIEW OF THE NUTRITIVE FUNCTION.

NUTRITION is very commonly spoken of as a function simply involving the addition of matter to the frame. My object is to show that it is, in truth, a vast complex process, comprehending not only digestion and assimilation, but circulation, respiration, secretion, excretion, and many others. Even nutrition, in its limited sense, is so essentially connected with the others referred to, that they must all be regarded as a whole or in their relations to one another. Thus digestion and assimilation are not only dependent on the quality and quantity of the aliment, but on the circulation of the blood, on the respiration which gives it oxygen, on the secretions by which food is prepared, and on excretion which removes those things which have served their purpose and would then be injurious. This mode of regarding the function of nutrition is of the utmost importance to the practitioner, as it not only leads him to see how nutrition may be deranged in so many ways, but to the scientific explanation of those complications which he is constantly meeting with. It must lead him to the conviction that diseases of nutrition are to be treated by an endeavour to restore the deranged processes to their healthy state in the order in which they are impaired; that for this purpose a sound knowledge of the process of nutrition itself is a preliminary step; that empirical systems can be of little benefit; and that the only correct basis for medical interference is a comprehensive and true physiology.

I propose, then, describing shortly this process as I understand it, dwelling only a little on those points a knowledge of which, in recent times, has been more or less augmented.

1. *Aliment and the Primary Digestion.*

Aliment.—All the various kinds of food are resolvable into the four elements—Carbon, Hydrogen, Oxygen, and Nitrogen, combined with certain mineral bases. The chemical constitution of plants and animals is nearly the same; and hence food derived from one kingdom of nature must contain those substances of which the bodies to be nourished in the other kingdom are themselves made up. The quantity required is principally regulated by the amount of air we breathe, its oxygen uniting with the carbon and hydrogen of the tissues to produce carbonic acid and water, and to evolve the heat of the body. In endeavouring, therefore, to ascertain what are the best kinds of food requisite for meeting the demands of supply, we must pay attention, in the first place, to the chemical principles which enter into the constitution of the living being to be nourished; secondly, to the mode in which these are combined to form tissues and organs; thirdly, to the atmosphere which surrounds it; fourthly, to the amount of waste it undergoes; and, fifthly, to the structure of the animal.

The results of numerous investigations, carried on with a view of determining these points, are as follows:—

1st. The proximate chemical principles required for the nourishment of man are the albuminous, the fatty, and the mineral principles. The first of these are substances rich in nitrogen—such as fibrin, caseine, and albumen, which occur both in the vegetable and animal worlds. The second are substances devoid of nitrogen, consisting of the animal and vegetable fats, together with starch, sugar, and gum, which by deoxidation are readily converted into fat. The third are mineral salts, more especially phosphate of lime and chloride of sodium. It has been proved that every kind of nutritive food must contain all three principles; and that the absence of any one of these induces starvation and death. Water is also necessary as a diluent.

2nd. It is not mere nitrogenous or non-nitrogenous kinds of food that will serve for nourishment, as is theoretically supposed by chemists. To form tissue, these chemical constituents must be converted into albumen and oil, so as to produce those elementary molecules of the chyle which constitute the formative substance of the blood cells; while the mineral constituents must be dissolved in the fluid in which these float. All three elements exist in every tissue; but the fibrous tissues abound in albumen, the glandular organs in fat, and the bones in mineral matter.

3rd. The amount of oxygen in the atmosphere greatly influences the quantity of food required. If cold and condensed, more oxygen will unite with the tissues, and more nourishment will be required to meet the demand and prevent waste. If warm and rarefied, the appetite diminishes, and less food is required.

4th. Bodily and mental exercise causes waste of tissue, and active men require more food than those who spend idle lives. An able-bodied labourer requires at least thirty-five ounces of dry nutritious food; nor can soundness of health be kept up for any length of time under thirty ounces. Sedentary people, it is true, exist upon much less; but they are weak, and generally valetudinarians. Of mixed solid and fluid food, there are required daily between six and seven pounds, of which about five pounds on an average consists of water.

5th. Living beings are governed in their selection of food by laws which the chemist cannot elucidate, and which are essentially connected with structure. It may be true, as Mülder pointed out, that the albumen of vegetables and of animals is the same; but some animals can only live upon one, and some on the other. The chemist has not explained to us why the carnivora reject vegetable and the graminivora refuse animal food, or why the substances which contain least nutritious matter for one class of creatures are the chief means of support for others. Hence, though chemistry may teach us much, the laws of dietetics can only be arrived at by the physiologist.

Mastication and insalivation.—The various kinds of solid organic food are, in the first place, broken down by the action of the teeth, jaws, tongue, lips, and cheeks, and thereby prepared for the solvent and chemical actions to which they are subsequently exposed. In the mouth they are intimately mingled with the saliva, a viscous fluid, which is not only necessary for the proper trituration of the food, as well as for articulation and deglutition, but which contains an animal principle—ptyaline—that has been proved to possess a peculiar action on starch, converting it into dextrine and glucose. Buccal saliva, however, is a mixed fluid, and, according to Bernard, originates from three sources, each of which communicates special properties to it. Thus the parotid glands secrete a clear, liquid food necessary for mastication; the submaxillary glands secrete a more gelatinous fluid, which is connected with the sense of taste; and the sublingual and palatine glands furnish a viscous, mucous matter, which surrounds the bolus externally, and causes it to slide more easily through the fauces and œsophagus. The peculiar action on starch is not confined to the saliva, although unquestionably strong in that fluid as we find it in the mouth. According to Bidder and Schmidt, about three and a half pounds of it are secreted daily.

Digestion in the stomach and intestines.—The food prepared in the mouth is conveyed by the excito-motory act of deglutition into the stomach—a bag in which it is further subjected to gentle trituration and the solvent action of the gastric juice. This fluid, according to Bidder and Schmidt secreted to the extent of about fourteen pints daily, is slightly acid, and contains a peculiar animal principle, *pepsine*. It has an extraordinary solvent power on the albuminous constituents of the food, as well as gelatin, chondrin, and gluten, which when dissolved in it produce a material, called *peptone*. It has no further effect on fatty substances than that of liquefying them; so that the albuminous and fatty constituents of the food pass into the duodenum in a liquid state, mingled with broken-down portions of animal and vegetable substances, in the form of a pulp, called *chyme*. In the duodenum this is mingled with the bile and pancreatic juice. The former neutralizes and evidently checks the further action of the gastric juice, and enables the alkaline and albuminous pancreatic fluid to operate on the fatty substances, which, previously liquefied, are at once minutely divided and emulsionized by it. The pancreatic juice

also changes amylaceous matters into sugar within the intestine, and may assist in disintegrating the bile, and rendering it more of an excretory product. The intestinal juice secreted by the Brunerian and other glands of the intestine has been shown by Bidder and Schmidt to be capable of dissolving the albuminous constituents of the food which have escaped the solvent action of the stomach. The same observer tells us that about three and a half pounds of bile are secreted within the twenty-four hours, and about half a pound each of pancreatic juice and of the intestinal juice. The large amount of digestive fluids secreted, amounting in all to twenty-two pounds daily, contain little solid matter, and are evidently designed to dissolve and act chemically on the aliment. While some of them operate more especially on one kind of substance, others do so more particularly on another, at the same time that they are not exclusively directed to one object. Thus the pancreatic juice may do other things besides emulsionizing fat, and the intestinal juice may perform lower down in the canal what the stomach has failed to accomplish. Then the importance of the peristaltic movements of the intestines must not be overlooked, which intimately mix the food with the different secretions, and constantly propel the mass from above downwards along the tube. Lastly, all the various processes are necessary to, and assist one another. The saliva, when swallowed, stimulates the secretion of gastric juice, as does this in its turn the flow of bile, the pancreatic and the intestinal juices; and hence why indigestion may arise from a permanent excess, diminution, or perversion of any of the actions concerned in the digestive process.

2. *Chylification and Sanguification.*

The food, prepared and acted upon in the manner described, is gently propelled by the peristaltic contractions of the alimentary canal along its interior, and is at the same time pressed against the numerous villi that project from all parts of the small intestine. These organs, covered with a layer of conical or cylindrical epithelial cells, imbibe the more finely molecular particles of the chyme, which pass through the delicate walls of the cells, and may be seen shortly after digestion collected in them. The fluid of the chyme is for the most part absorbed by the bloodvessels. From the epithelial cells the molecular material passes through the basement membrane of the villi, and finds its way into the chyle ducts, whence it is conveyed to the lymphatic glands. The passage of the molecular matter from the chyme into the epithelial cells is probably owing to endosmose, assisted by the mechanical pressure exercised by the muscular walls of the intestine. The mechanism of the transmission of the molecular chyle into the primary chyle duct is unknown.

A lymphatic gland consists of pouches or sacs, surrounded by a firm fibrous membrane, which is richly supplied by bloodvessels. The interior of these pouches or sacs contains a molecular fluid, in which numerous nuclei and a few cells may be found in all stages of development. The glands of Peyer I agree with Brucke in considering as the first series of lymphatic glands. These are succeeded by other series in the mesentery. All of them are connected with one another by lacteals, which ultimately terminate in the thoracic duct. They serve to subject the molecular chyle as it is first derived from the chyme to the action of these glands. There the onward flow of the fluid is somewhat delayed; an exchange takes place between it and the surrounding blood, and nuclei and cells are formed—more especially, however, nuclei—by molecular aggregation. Hence why, on cutting into these glands shortly after digestion and examining microscopically the fluid they contain, it may be seen that a molecular fluid (first described by Gulliver) is more or less crowded with naked nuclei, which resist the action of acetic acid. On repeating the observation on fluid taken from the thoracic duct, the same thing is noticeable, only several of the nuclei are now flattened, and in every point, except colour, closely resemble the blood corpuscles. It is clear, therefore, that chylification and sanguification are perfected through the action of the lymphatic glands upon the molecular chyle; that in them the blood corpuscles are formed, and conveyed by the thoracic duct into the circulation at a point not far from the right side of the heart; from thence they are rapidly propelled into the lungs, where, on being exposed to the oxygen of the atmosphere, they assume colour, and thereby become the coloured corpuscles of the blood.

There are other glands which are supplementary to this function of sanguification, and which in consequence were first called by Hewson lymphatic glands. They are the spleen, thymus, thyroid, and supra-renal bodies. These organs also contain pouches or shut sacs, rich in a molecular fluid, and multitudes of naked nuclei. Like the lymphatic glands, also, they are very vascular, and are connected with the thoracic duct by numerous minute channels or lymphatics. No difference whatever can be distinguished between the glandular contents of these organs and those of the lymphatic glands; and other facts connected with their morbid states—more especially the production of leucocythemia—serve to convince us that, like them, they are connected with sanguification; hence their modern name of blood glands. The whole system of lymphatic glands may be said to secrete or form the blood corpuscles, although the nature of the blood, as a whole, being very complex, cannot be clearly understood until we study the results of the secondary digestion.

3. *Respiration and Circulation.*

The lungs are organs so constructed as to expose a large surface, covered with capillaries, to the action of the atmosphere. In man, the air, by going into and coming out of the lungs, loses its oxygen, and has substituted for it carbonic acid, which is given off in the proportion of 1000 of the latter to 1174 of the former gas. The excess unites with the hydrogen, phosphorus, sulphur, and other elements of the tissues, giving rise to various chemical compounds, and serving, in the act of combination, to produce much of the animal heat of our bodies. The amount of carbonic acid gas given off by the lungs varies according to circumstances. Under ordinary circumstances, the amount would yield eight ounces of solid carbon daily; during hard labour, twelve ounces; and during sleep, four ounces.

The most important experiments in recent times, as to the excretion of carbonic acid by the lungs, have been made by Dr. E. Smith, of London. In determining the influence of food, he made numerous careful experiments; and of the many conclusions he arrived at on this subject I may quote the following:—1. That the influence of food is evident soon after its introduction into the system, and attains its maximum within about two hours. 2. Pure starch and fat do not increase the quantity of carbonic acid evolved, but on the contrary, the latter somewhat lessens it. 3. The cereals, however, which contain, besides starch, albuminous products, gluten and sugar, increase the excretion of carbonic acid to the extent of two grains per minute. 4. Milk, sugar, tea and coffee, do the same. 5. Alcohol, rum, and malt liquors increase it to the extent of one grain per minute; but brandy and gin, especially the latter, lessen it. 6. Foods may be classified into non-excitants and excitants as regards the excretion of carbonic acid gas. The *non-excitants* are, starch, fat, some alcohols, and coffee berries. The *excitants* are, sugar, milk, cereals, potatoes, gluten, gelatin, fibrin, albumen, tea, coffee, cocoa, chicory, alcohol, rum, and some wines.

These results are remarkable as distinguishing starch and fat as non-excitors of increased carbonic acid in expiration, thus confirming what I have long maintained on histological grounds—viz., that fats and oils serve largely to build up the tissues, and are not, as Liebig endeavoured to show, merely respiratory food. They are further remarkable in showing that alcohol and rum increase, while brandy and gin diminish, the carbonic acid—effects which, if correct, are wholly inexplicable.

The effect of respiration on the blood is to give colour to the free nuclei in mammals, and to the cells in the other vertebrata which join the blood from the chyliferous system. It also produces those differences which characterize arterial from venous blood. The only novel point I may allude to is the fact shown by Bernard, that venous blood coming from glands in action is red like arterial blood, and, like it, owes its colour to excess of oxygen. A perfect chemical theory of respiration is still a desideratum.

The circulation of the blood is kept up by the various motor powers of the heart, arteries, capillaries, veins, and lungs, the nature and amount of which we cannot here dwell upon at length.

The most careful investigations made in modern times by Poissieulle, Valentin, and Ludwig, as to the static force of the heart and arteries, show that it is equal to about four pounds on the square inch. Assuming the internal superficies of the left ventricle to be about thirteen inches, this would give fifty-two pounds as the force it exerts. Now, Hales, more than a hundred years ago, calculated it to be fifty-one and a half pounds, which must not only satisfy us of his accuracy as an observer, but convince us that no change has occurred in the force of the pulse, either in man or animals, during that time. The importance of this fact I shall allude to subsequently. The experiments of Marey indicate that there are two forces

propelling the fluid—one, direct, dependent on the heart or pump; the other secondary, caused by the recoil of the distended blood tube. The intensity of the latter force, however, gradually diminishes as the wave of fluid recedes from the source of afflux, while the time of the pulse remains the same.

What has most attracted attention in recent times is a more correct explanation of the phenomena formerly called *determination of blood*. This afflux of the blood to different parts of the system, instead of being sent by a *vis a tergo*, is in truth drawn or attracted there by a *vis a fronte*. This force originates in the chemical and vital changes which go on in the ultimate molecules of the part. Stimulation or irritation of texture is the exciting cause, and the result is a flow of fluid towards the tissues or organs requiring it. Examples are seen in the ascent of sap in plants, in the turgid mamma during lactation, in the gums of the infant when teething, in the integuments surrounding the annual growth of the stag's horn, in the circulation of the acardiac fœtus, in the female sexual organs during menstruation, in the portal circulation of the liver, and in the congestion of irritated texture preceding inflammation. In all these cases there is no heart, pulsatile vessel, or pumping apparatus which can especially force the fluid into the parts referred to, and therefore they must draw or attract it by a force the result of molecular action.

4. *Growth, Secretion, and the Secondary Digestion.*

From the blood so formed and elaborated there is constantly passing off, through the capillaries, matters which are transformed into the tissues and secretions. When we endeavour to ascertain in what way this is accomplished, it is clear it cannot be attributed to any power in the blood or bloodvessels, as these are the same in textures and glands the most diversified. We are therefore obliged to ascribe it to an influence seated in the textures themselves. This in its nature must be attractive and selective: attractive, in so far that matters are drawn from the circulation to be added to the textures; and selective, in so far as particular constituents of the circulating fluid are chosen by one tissue, and different ones by another. This power is not seated in cells only, as has been supposed, but in all the tissues. Muscle which is molecular, gland which is cellular, tendon which is fibrous, and brain which is tubular—all possess it. In cartilage, we see it most powerful in the intercellular tissue, which is the first to attract from the blood the fluid loaded with mineral particles. Hence it seems to be as strong relatively in the minutest molecule as in the largest cell. This power of growth, then, of which secretion is a modification, is, like the power of contractility and of sensibility, an ultimate fact in physiology. For the conditions regulating it, I cannot do better than refer you to the able writings of Mr. Paget.

Growth having been effected, it is necessary that the particles of the tissues which have fulfilled their function and are worn out should be removed, to give place to new ones. This constitutes the so-called *secondary digestion*: that is, in the same way that a piece of food—say flesh—is broken down, rendered molecular and fluid, and is absorbed into the blood to add bulk to the frame, so is our own living flesh constantly breaking down, rendered molecular and fluid, and absorbed into the blood, to be finally thrown out of the system. Thus the blood receives matter from two sources—the primary and secondary digestions; and is continually giving off matter in two directions—one to build up the tissues and form the secretions, the other to produce the excretions.

The blood, therefore, is a complex fluid, partly made up of materials derived from the alimentary canal or primary digestion, partly derived from the effete materials coming from the tissues, or secondary digestion, and partly from gaseous fluids received from the atmosphere through the lungs. The properties and morbid conditions of this wonderful fluid I shall speak of more particularly in my next lecture. In the meantime we must not forget that the changes we have referred to—that is to say, the various metamorphoses of the tissues and their chemical combinations—produce the *animal heat* of the body. One of the most important contributions to science of Liebig is unquestionably the demonstration that the union of oxygen with the blood in the lungs, and the formation of carbonic acid in the capillaries united, produce sufficient heat to account for what is found in the animal body. Other causes, however, co-operate, among which muscular contraction is important. Helmholz has shown, that heat is thereby generated in contractile muscle recently cut from the animal, and therefore unconnected with a circulation. These metamorphoses further produce the force and energy which are applied in so many forms and combinations to maintain the physical and vital actions of the economy.

5. *Excretion.*

The matters admitted into the blood as the result of the secondary digestion circulate with that fluid, but are soon separated from it in various forms, to be conducted out of the system by different channels.

1st. In the form of carbonic acid and watery vapour by the lungs.

2nd. Through the liver, and this in the form of bile, fat, and hydrated starch, whereby a large amount of hydro carbon is excreted. Of the bile we have already spoken. Fat is found in considerable quantity in the liver, giving rise, in cases where there is excess of heat and food with little exercise, to a want of balance between the hepatic and pulmonary excretions. Thus fatty liver is found in all stall-fed animals, and is likely to be present among Europeans in India, and drunkards at home. Lastly, it has been shown by Bernard that a large quantity of hydrated starch (*glycogen*) is continually formed in the liver, which, he thinks, on contact with the blood, is transformed into sugar, and in health is separated as carbonic acid by the lungs. If this be in excess, or if the action of the lungs be defective, it passes off as sugar by the kidneys, constituting diabetes. This view, though supported with great ingenuity, and apparently unanswerable experimental arguments, has recently been shaken by the investigations of Dr. Pavy, which tend to show that the phenomena described by Bernard are *post mortem*, and do not occur in the living animal. But however the products of the liver may ultimately pass out of the system, its chief function must be regarded as excretory.

3rd. Through the kidneys, there pass off from the body a large amount of water, of earthy salts, and especially two compounds rich in nitrogen—viz., urea and uric acid. These constituents may be derived from either the primary or secondary digestion; so that the functions of the kidneys are altogether excretory.

4th. The skin is constantly excreting water and oil, a minute quantity of carbonic acid, and a mass of gelatine and horny matter, in the form of epidermis, hair, nail, and other integumentary appendages.

5th, and lastly. In addition to the residue of the food, there are discharged from the bowels fatty and earthy matters.

The amount of excretory matters separated in this way may be estimated as follows:—Of carbonic acid there are given off about two pounds, or seven cubic feet, of which an ounce and a half may be separated by the skin. Of water there is about six pounds separated, one half by the urine and fæces, and the other half by the lungs and skin. The urine contains ten times as much as the fæces; and the skin gives off twice as much as the lungs, or somewhat more. As it is calculated that only five pounds pass into the body mixed with the fluid, the extra pound is supposed to be formed in the system by the union of oxygen with water. Of urea an ounce is separated in the union daily of an adult man, together with eight or ten grains of uric acid. It is by these substances, which contain about fifty per cent. of nitrogen, that the azote which enters the body is almost altogether separated from it. The earthy salts pass out in minute quantity dissolved in the sweat, and are given off more largely by the urine, which contains daily four drachms and a half of chloride of sodium, four drachms of sulphate of soda and potash, two drachms of acid phosphate of soda, and one drachm of phosphate of lime and magnesia. In the fæces another four or six drachms of mineral matter may be passed daily, the chief portion of which is derived from the residue of the food. Besides the substances named, a certain quantity of fatty, colouring, extractive, and other matters is excreted, the amount of which has not been yet estimated.

In this way, the albuminous, fatty, and mineral ingredients of the food, after having entered the body to form blood, and through it to build up tissue, is ultimately ejected from the economy, after having undergone a series of histogenetic and histolytic molecular changes, and been metamorphosed by chemical, mechanical, and vital agencies. The mode in which this is accomplished is now tolerably well known. Doubtless several points have yet to be determined, and numerous details require investigation. But the great function of nutrition, as I have now placed it before you, may be said to be established in science. In the same manner that the chemist, following Dumas, recognises in nature at large the exchanges which are constantly going on between the mineral, the vegetable, and the animal worlds—the earth and air building up vegetables, these building up animals, and these on

their decomposition being again restored to earth and air,—so does the physiologist in each animated creature trace the food through its changes until it is converted into tissue, has enjoyed life for a time, and is then decomposed, returning, though in an altered form, to the external world whence it came.

The molecular law of development described in my first lecture is singularly well illustrated by the function of nutrition as now explained. Food consisting of well formed organic matter, animal and vegetable, is disintegrated by the primary digestion. The histolytic molecules so produced become histogenetic ones, and build up the blood corpuscles. These are in turn disintegrated and dissolved to form the liquor sanguinis, but once more other molecules are obtained from it to keep up the growth of the tissues. The histogenetic molecules so produced are again rendered histolytic by the secondary digestion, and, circulating in the blood, undergo various combinations before being excreted from the economy. In this manner the great function of nutrition is shown to be essentially molecular.

Practical applications.—It would occupy too much time to point out at length how this method of viewing the function of nutrition is valuable to the medical practitioner. It demonstrates to us how one function has a necessary dependence on, and relation to, another. How if the food be bad as to quality or quantity, the other processes must suffer; how if secretion be defective, digestion cannot go on; and how if excretion be obstructed, the blood becomes poisoned from accumulation of effete matter. The fact of the blood being supplied from two sources, the primary and secondary digestions, enables him, among other things, to recognise especially the morbid states produced from a derangement of either, together with the similarities and dissimilarities they produce. For example, a uric acid diathesis—that is, an increase in the uric acid salts in the blood—may arise from an excess of nitrogenous food, or from absorption of the nitrogenized tissues—that is to say, both from the primary and secondary digestions—as in gout and rheumatism. Gout is caused by good living and an indulgence in acid wines. It is most common in the higher classes. Rheumatism is caused by exposure to cold or moisture, and hardships, often combined with impoverished diet. It is common among the poorer classes. In the one, excess of uric acid is principally derived from the nitrogenized principles of food in the primary digestion; in the other, it is obtained from the nitrogenized principles of the tissues in the secondary digestion. Thus, gout and rheumatism are similar, inasmuch as deranged nutrition, leading to the formation of uric acid, may be produced in both. They differ so far that this is derived from excess of food in the first and waste of tissue in the second. Hence why a vegetable diet and exercise are the cures for gout, while an animal diet and oleaginous food are useful in rheumatism. Other equally striking instances might readily be given of the importance of practically studying the compound process of nutrition as now described.

NOTE IN REPLY TO DR. HICKS.

Dr. Hicks admits that vibriones may originate from molecules, and may group themselves in rows to form fibrillæ. If so, it constitutes no objection to my views to maintain that such filaments once produced may increase by segmentation. As to the unimpregnated uterus being contractile I am not aware that it has been recognised in physiology. Any facts as to this point would, I conceive, constitute an interesting addition to our knowledge.

INFANT MORTALITY, 1861 2.—A return just issued shows that during the year 1861 and the first six months of 1862, the number of inquests held on children under ten years of age is as follows:—England: Metropolitan Districts, 1549; County of Bedford, 27; Berks, 63; Bucks, 37; Cambridge, 53; Cheshire, 134; Cornwall, 121; Cumberland, 26; Derby, 114; Devon, 83; Dorset, 23; Durham, 50; Essex, 60; Gloucester, 147; Hereford, 21; Herts, 16; Huntingdon, 10; Kent, 56; Lancashire, 758; Leicester, 76; Lincoln, 133; Monmouth, 37; Notts, 70; Oxford, 58; Rutland, 5; Salop, 39; Somerset, 143; Southampton, 85; Stafford, 222; Suffolk, 52; Surrey, 20; Sussex, 62; Warwick, 50; Westmoreland, 10; Wilts, 77; Worcester, 52; York, 287—Total England, 4978. Wales: Anglesea, 6; Brecon, 6; Cardigan, 1; Carmarthen, 10; Carnarvon, 10; Denbigh, 17; Flint, 9; Glamorgan, 55; Montgomery, 18; Pembroke, 1; Radnor, 2—Total Wales, 135. Total England and Wales, 5113. Out of this total there are only 600 returned as above the age of one year.

ON

BRONCHITIS ARISING OUT OF CERTAIN INDUSTRIAL OCCUPATIONS.

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THE following cases illustrate at once some of the chief causes and the usual history of what might, perhaps, not inaptly be termed Industrial Bronchitis. Irritation of the bronchial mucous membrane, induced by inhaling either dust evolved during certain mechanical processes, or noxious vapours, or the products of combustion, is in such cases the starting point of the disease. If the irritation be extreme, it may, as in Case 3 (D. M'L——), directly produce bronchitis of sufficient severity to disable the patient from following his employment. If only a slighter degree of irritation be caused, as in Case 4 (H. P——), the result must, perhaps, be regarded rather as a state of predisposition to bronchitis than as the actual disease itself, which only follows if the patient should be subsequently exposed to some such exciting causes as vicissitudes of weather, cold or damp, or an increased degree of local irritation. The predisposition in these cases probably consists in the gradual enfeeblement and exhaustion of the bronchial membrane, by the chronic irritation to which it is subjected, rendering it prone to take on inflammatory action from causes which a perfectly healthy membrane might resist. The line between the state of predisposition to bronchitis and the state of actual disease may indeed, pathologically considered, be difficult to draw; but, practically, there is between the two classes of cases referred to this marked difference, that in the one the sufferer passes directly into a state of illness of more or less intensity, incapacitating him from following his employment, while in the other class he is almost unconscious of, or at least entirely disregards, the slighter chronic irritation of the bronchial membrane with which he is affected. It is only on careful inquiry into their antecedent history that such patients are ascertained to have suffered, long before the accession of definite illness, from hoarseness in the morning or from slight cough and expectoration; the latter being often very scanty, but frequently tinged with the colour of any dust they may have inhaled, just as during a London fog the expectoration of bronchitic patients often becomes tinged with soot.

This ailing condition may last for many years, and only pass into active disease when the debilitating influence of advancing age has lessened the power of resistance to the industrial cause of local irritation, or when to the latter are added some of the exciting causes already mentioned. Thus in Cases 2 and 4 (R. H—— and H. P——) the patients had suffered from slight chronic irritation of the bronchial membrane long before the accession of the severer symptoms from which they dated the commencement of their illness. Also in Case 1 (G. P——) there had been slight cough and expectoration long before the occurrence of the attack of pneumonia which disabled the patient from work. This latter disease is not uncommon among operatives, such as grinders, stonemasons, quarrymen, and the like, who are exposed to inhale particles of dust, either heavy in their nature or angular in form; but its accession is, in such cases, usually preceded by irritation of the bronchial membrane of longer or shorter duration, and, indeed, very often by one or more definite attacks of bronchitis. Chronic bronchitis, on the contrary, is generally the only result of the local irritation in the cases of operatives, such as coal-miners, mattress-makers, chaff-cutters, &c., who inhale noxious vapours or dust of a lighter nature; the parenchyma of the lungs in such cases rarely becoming implicated, as exemplified in Cases 3 and 4 (D. M'L—— and H. P——).

After the relief of the more urgent symptoms, all the above patients derived great benefit from the tincture of larch, a remedy which for the last four or five years I have been in the habit of using with much advantage in the treatment of chronic bronchial irritation. Its effects upon the bronchial membrane are analogous to those of copaiba, Canada balsam, ammoniacum, and benzoin, all of which are sometimes very serviceable in chronic bronchial affections; but the tincture of larch is much less nauseous, more certain in its operation, and can be more conveniently combined with other medicines than any of the above-named remedies.

CASE 1.—G. P——, aged twenty-five, stone-dresser, admitted as an out-patient of the Middlesex Hospital Aug. 2nd, 1861, under the care of Dr. Greenhow. He had for several years been subject to slight cough attended by scanty expectoration, which he attributed to the irritation produced by inhaling the gritty dust which is copiously evolved during the process of stone-dressing. About a year before he presented himself at the hospital, he had suffered from an attack of severe pain in the right side, attended by cough and a red gelatinous expectoration. He recovered from this attack, but continued during the following winter to have more cough than usual, and was suffering at the time he became an out-patient from dyspnœa on exertion, with cough and a copious yellow-coloured expectoration. His skin was cool; pulse 80, of good volume; tongue clean. The chest expanded less fully on the right than on the left side, but air entered freely into the upper lobes of both lungs. There was slight rhonchus here and there in the upper part of the chest on both sides, and coarse crepitation throughout the lower lobe of the right lung. A blister was applied over the seat of the crepitation, and the following mixture was prescribed:—Dilute hydrochloric acid, dilute nitric acid, of each seven minims; ipecacuanha wine, ten minims; tincture of hyoscyamus, and compound tincture of gentian, of each half a drachm; water, one ounce: three times a day.

Aug. 27th.—Patient very much improved. The respiration was rather coarse in several parts of both lungs, but the resonance on percussion was perfectly clear in the apices, which were also freely permeated by air. The crepitation in the lower lobe of the right lung had almost disappeared. Tincture of larch, twenty minims, was added to each dose of the medicine.

From this date he went on perfectly well, and when last seen, in October, reported himself as much freer from cough and expectoration than he had been for several years. The respiration, however, still continued tubular in several parts of both lungs, and was whiffing and harsh in character throughout the lower lobe of the right lung, but entirely unattended by crepitation or other moist sounds.

CASE 2.—R. H——, aged fifty-nine, stonemason, admitted as an out-patient Jan. 3rd, 1862. He had suffered much during the last seven or eight years from cough, attended by dyspnœa and expectoration, which were usually worse in winter and better in summer, but were becoming gradually more severe year by year. Previous, however, to the period from which he dated the commencement of his illness he had long been the subject of slight cough, attended by scanty, thick, transparent expectoration, and more or less wheezing of a morning. He considered his ailments to have been caused by the dust inhaled while he was at work, in corroboration of which opinion he stated that he always became very much better when deficiency of employment obliged him to discontinue work for a few weeks. When he presented himself at the hospital he was suffering very severely from dyspnœa, and loud mucous rhonchus was heard when the chest was merely approached without being touched by the ear. The respiration was laboured, and the shoulders were rounded. The chest was everywhere resonant on percussion; the respiration in the upper part of the lungs was loud and sibilant, both with inspiration and expiration. Coarse crepitation and mucous rhonchus were found in both lungs, from the third rib downwards. The expectoration was white, thick, and tenacious, the skin cool, and the pulse quiet. Ordered, the following mixture to be taken every six hours: Decoction of senega, one ounce; sesquicarbonate of ammonia, four grains; tincture of squills, fifteen minims; ipecacuanha wine, ten minims; compound tincture of camphor, twenty-five minims.

Feb. 16th.—Very much improved, but still has cough, wheezing, and expectoration. The following mixture was ordered to be taken three times a day: Dilute nitric acid and dilute hydrochloric acid, of each seven minims; ipecacuanha wine, ten minims; tincture of larch and compound tincture of gentian, of each half a drachm.

March 7th.—In all respects better. The crepitation and mucous rhonchus had nearly disappeared, and sibilant respiration was now heard in their stead throughout the lower part of the lungs. The patient continued the last medicine for nearly two months, by which time he was so much improved as to be able to resume his work.

He showed himself again on June 27th, and was then almost free from cough and expectoration, and expressed himself as feeling better than he had done at any time for several years past.

CASE 3.—D. M'L——, aged fifty-eight, painter, admitted as an out patient March 28th, 1862. Had been a perfectly healthy man, and had never suffered from cough until the spring of 1861, when he was employed to repaint the inside of a large public hall, in which there had been a fire, and large quantities of water having been used to extinguish it, the building was being dried during the time he was at work by means of open brasiers, burning a mixture of coke and charcoal. He very soon experienced great inconvenience from breathing the air impregnated with the fumes evolved by this combustion, and before the expiration of the six weeks he was employed in the hall he began to suffer severely from dyspnœa, cough and expectoration, which continued up to the time of his admission as an out-patient, when he looked ill, and was much emaciated. His respiration was much laboured; the chest was everywhere resonant on percussion, and rhonchus was heard throughout almost all parts of both lungs; expiration was generally prolonged, and tubular respiration had in some parts superseded the normal vesicular murmur. A blister was applied to the sternum, and the following medicine was prescribed:—Dilute hydrochloric acid and dilute nitric acid, seven minims of each; tincture of larch, tincture of hyoscyamus, compound tincture of gentian, of each half a drachm; ipecacuanha wine, ten minims; water, one ounce: to be taken three times a day. A five grain conium pill at night.

April 11th.—He was already much benefited, both as regarded frequency of cough and dyspnœa, and continued to improve until the latter end of May, when he was discharged as convalescent. Shortly afterwards he took cold, and again came under treatment.

June 6th.—The patient was now suffering from an attack of subacute bronchitis, characterized by cooing sounds extending more or less throughout both lungs; the resonance on percussion remained quite clear; the skin was cool and the pulse quiet. There was much dyspnœa and cough, accompanied by frothy expectoration. Ordered, liquor of acetate of ammonia, two drachms; ipecacuanha wine, five minims; tartrate of antimony wine, fifteen minims; compound tincture of camphor, twenty minims; water, six drachms: to be taken every six hours.

16th.—Much better. Sonorous rhonchus, with prolonged expiration and creaking in the lower lobes of both lungs, had now superseded the cooing sounds heard on the 6th inst. There was still much cough and dyspnœa, but the expectoration was thicker, and had assumed a yellow colour. Ordered, dilute nitric acid and dilute hydrochloric acid, seven minims of each; ipecacuanha wine, ten minims; tincture of larch and compound tincture of camphor, half a drachm of each; water, one ounce: to be taken three times a day.

27th.—Dyspnœa and cough much diminished; expectoration thick and transparent; respiration sonorous throughout both lungs; expiration prolonged and very audible; no moist sounds. Repeat the mixture.

July 25th.—The man had gained flesh, looked well, and had returned to his occupation as a painter. He had now much less dyspnœa, and but slight cough, with very scanty expectoration.

Aug. 22nd.—Had continued the medicine containing tincture of larch up to this date, and was now free from dyspnœa or wheezing, excepting to a very slight extent in the early part of the morning. Had no cough, and raised only a very little clear mucus on first getting up.

CASE 4.—H. P——, aged fifty-two, mattress-maker, admitted as an out patient June 20th, 1862. Was perfectly healthy until a few months before presenting himself, but since that time had been suffering from cough and dyspnœa, with very scanty expectoration. He said, however, that he had for a much longer period felt stuffy and uncomfortable about the chest, which he attributed to the dust inhaled in large quantities while engaged in his occupation. His voice was raucous, skin cool, pulse quiet, and tongue clean; the chest was everywhere resonant on percussion, but in respiration the right side expanded less perfectly than the left; respiration sibilous, and expiration distinctly audible and prolonged on both sides of the chest; coarse crepitation in the lower lobe of the right lung anteriorly; bronchitic creaking posteriorly. Ordered, dilute nitric acid and dilute hydrochloric acid, seven minims of each; compound tincture of gentian and tincture of hyoscyamus, half a drachm of each; ipecacuanha wine, ten minims; water, one ounce: to be taken three times a day.

June 27th.—Somewhat better; expectoration more copious, thick, and of a yellow colour. Add twenty minims of tincture of larch to each dose of the previous medicine.

July 25th.—Scarcely any cough or dyspnœa remaining, though the patient still raised without difficulty a thick yellow expectoration. Repeat the medicine.

August 15th.—Was now better than he had been for long, being almost entirely free from expectoration and from oppression of the chest.

Upper Berkeley-street, Feb. 1863.

ON A NEW FORM OF BINOCULAR OPHTHALMOSCOPE.

BY ROBERT B. CARTER, M.R.C.S.,
LATE SURGEON TO THE NOTTINGHAM EYE DISPENSARY.

IN a recent number of the *British Medical Journal*, Mr. J. Zachariah Laurence published some suggestions for the improvement of binocular ophthalmoscopy by means of an instrument which he described, and which was then being made for him by Messrs. Murray and Heath, of 43, Piccadilly. In the course of its construction various improvements upon the original design were suggested and adopted, and the firm just mentioned have at last produced an ophthalmoscope of very great value and practical utility. While lately acting as surgeon to the Kent County Ophthalmic Hospital, I had an opportunity of testing its powers, and I am anxious to call the attention of the profession, and especially of students and beginners, to its advantages over the instruments in common use.

In using the monocular ophthalmoscope of Coccius or Liebreich for the indirect or inverted image, in spite of abundant illumination and perfect definition, the objects seen have the appearance of being all in one plane. The vessels of the retina can be distinguished from those of the choroid by colour and direction, but not by any appreciable difference in their position. The depressions formed by choroidal atrophy or posterior staphyloma, and the elevations from sub-retinal hæmorrhage or effusion, present colours which contrast strongly with those of the general field, but scarcely any appearances by which, prior to reflection, their sunken or raised position can be positively determined. Even the cupped optic disc, the most marked of the surface changes of the fundus oculi, betrays itself chiefly by the bending of the vessels at its margin, and by inexperienced observers is not seldom mistaken for an elevation. Indeed, the limited power of one eye to furnish data for correctly estimating relief and relative position is perhaps the chief source of difficulty in the interpretation of ophthalmoscopic appearances.

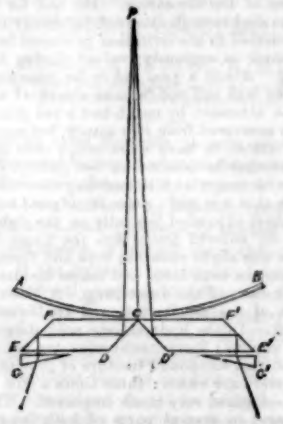
We are indebted to M. Giraud-Teulon for the suggestion by which this difficulty may be overcome. His binocular ophthalmoscope has now been nearly twelve months in use in this country, and it may fairly be said to enable the student to discern, at once, the nature of appearances that, with the monocular instruments, are obscure to any but the most experienced observers. With its assistance, not only is the depressed optic nerve immediately recognised as an unmistakable cup or cavity, but even small effusions of blood, or lymph, or serum, on the one hand, and patches of atrophy on the other, present aspects that are conclusive with regard to their relations to the general level of the field. The vessels of the retina, too, appear to stand out from, and to be distinctly on a plane anterior to, those of the choroid, which again, in young light eyes, with good illumination, may be recognised at different depths in the chorio-capillaris. It would perhaps be too much to say that such assistance is of great value to those who have had large experience in the use of monocular instruments; but for those who desire to learn the use of the ophthalmoscope quickly, or to avoid errors of interpretation in spite of having had small experience, the instrument of Dr. Teulon can hardly be too highly estimated.

It has, however, two serious faults. In the first place, the observer is annoyed by multiplied reflections of the mirror; and, in the second, any one instrument can only be used by persons whose eyes are placed at the same distance apart.

It consists essentially of the parts shown in Fig. 1, in which A B is a concave ophthalmoscopic mirror, with a central perforation. Behind it are two rhombs of glass, C D E F, C D′ E′ F′. A pencil of light returning from P, the fundus of an eye under observation, and passing through the perforation in the mirror, falls upon the surfaces C D, C D′, so as to be divided, and reflected right and left, to the surfaces E F, E′ F′, by which each portion is again reflected to the observer. From these surfaces the pencils would emerge parallel, but by means of the prisms G G they are made to diverge as if proceeding from P.

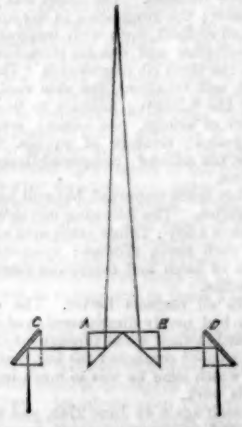
Now, unless the distance between the pupils of the observer correspond precisely with that between the points of emergence of the rays, Dr. Giraud-Teulon's instrument is almost useless. A slight difference in width, sufficient to prevent perfect combination of the two portions of the light pencil, produces double vision and complete confusion. A somewhat greater difference, by excluding one eye from the visual act, reduces the instrument to a monocular ophthalmoscope of small utility, one-half the light being lost to the observer. Moreover, as each pair of ocular prisms will produce a certain definite divergence of the light pencils, the observer is required to maintain a corresponding convergence of his optic axes. As commonly sold, two pairs of prisms are supplied, one pair to produce divergence as from a near point, for a myope, the other as from a point more remote, for a presbyope. But there are few eyes to which the power of either pair of prisms will be exactly adapted, and, consequently, the observer will nearly always be called upon for some unusual and fatiguing exertion of the ocular muscles—an exertion that must always seriously interfere with, or even altogether prevent, prolonged and careful examination. Dr. Giraud-Teulon's ophthalmoscope has been chiefly made by Messrs. Nachet, from whom, after more than one trial, and after sending them carefully-taken measurements, I have been unable to obtain a perfect fit; and if such fit were at last procured, it would, like missing documents, be of no value to anyone but the owner.

FIG. 1.



To obviate this inconvenience, Mr. Laurence suggested the removal of the rhombs, and the substitution for them of mirrors to represent their reflecting surfaces. As now perfected by Messrs. Murray and Heath, the instrument is made as follows.

FIG. 2.



In place of the rhombs, two prisms (A, B) are placed immediately behind the perforated mirror, so as to divide the light pencil, and reflect it right and left as before. The reflected portions are then received, and again reflected, by two mirrors (C D) so arranged that by turning a screw they can be set at

any required distance apart, from two to three inches; while in order to facilitate adjustment, the plate upon which they slide is finely graduated. Another screw increases or diminishes their inclination, and consequently the direction in which pencils proceed from them. As shown in the diagram they are parallel to the reflecting faces of the prisms, and at right angles to each other, so as to give parallel pencils. By increasing their inclination they give divergent, by diminishing it, convergent pencils. Among other advantages of this arrangement, the ocular prisms of Dr. Teulon's instrument are not required, and room is therefore given for ocular lenses, as in the ordinary ophthalmoscopes, either to amplify the indirect image, or, in myopia, to obtain the divergence necessary for direct examination. It is obvious that the inclination of the mirrors (C and D) affects only the direction of the pencils reflected from them, and does not at all alter the character of convergence or divergence given to each pencil by the refractive apparatus of the eye from which it issues.

Messrs. Murray and Heath's instrument, on account of its adjusting properties, not only admits of being passed from hand to hand, and modified, by turning a screw, to suit any observer, but it has the much greater advantage of affording complete rest to the muscular and accommodation apparatus. By altering the inclination of the mirrors, the precise direction may be given to the pencils of light that enables the eye to receive them without effort, and to study the images they form without fatigue. On this account, and also because it is free from the reflections of the mirror that are so annoying in Dr. Teulon's instrument, it is the easiest of all ophthalmoscopes to use, and is calculated to promote the general cultivation of ophthalmoscopic inquiry. There is a superficial appearance of complexity about the screws, the use of which should be mastered by preliminary practice with a candle flame as an object; and the instrument is only perfectly adjusted when the observer looks through it, almost without being conscious of its presence. If a little pains be taken in the first instance, the beginner will find no difficulty, except a liability to set the mirrors much too near or too far apart, in either case totally excluding one eye from participation in the visual act, and using in fact a monocular ophthalmoscope, with perfect definition, but no relief. After once seeing the relief that may be obtained, the way in which the retinal vessels appear to stand out from the nerve entrance, this mistake would be impossible.

In order to obtain the direct image, with sufficient illumination, the patient must sit under a jointed gas-burner, so that the flame can be brought well forward, and a little below the level of the vertex. An additional mirror (convex) and collecting lens, on the principle of Zehender's, might for this purpose, perhaps, be substituted for the concave mirror with advantage.

The variable inclination of the mirrors, besides fulfilling the purposes mentioned above, allows the observer to experiment upon his own accommodation and powers of visual direction in a highly interesting manner, although space forbids me to enter into details on this part of the subject.

The degree of relief afforded by Messrs. Murray and Heath's instrument is superior to anything that I have been able to obtain with Dr. Giraud-Teulon's—a circumstance to be explained possibly by the rarity of a perfect fit with the latter. One patient, in whom I carefully compared the powers of the two instruments, and the state of whose eye was well adapted for testing them, suffered from a condition the nature and cause of which ought to be recorded. She had considerable detachment of the anterior portion of the retina on the nasal side of the right eye, as a consequence of that operation which the surgeons who perform it term "division of the ciliary muscle." A puncture had been made into the eye, ostensibly for the relief of myopia, and the resulting sub-retinal hæmorrhage or effusion had been sufficient to produce a lesion seriously and permanently injurious to vision.

In some instances Messrs. Murray and Heath have substituted prisms for the lateral mirrors, as shown by the dotted lines in Fig. 2. It is obvious that prisms would produce the same general effects, and be susceptible of the same changes of position, as the mirrors themselves; but I have not yet been able to ascertain that they possess any conspicuous advantage over them.

In conclusion, I cannot too strongly recommend the new ophthalmoscope, which affords means of examining the fundus oculi with a facility and accuracy never before obtained.

Stroud, Gloucestershire, Feb. 1863.

BIRTHS AND DEATHS IN IRELAND.—It is calculated that in Ireland, with a population of 5,764,000, there are annually 193,514 births and 132,756 deaths.

A Mirror

OF THE PRACTICE OF

MEDICINE AND SURGERY

IN THE

HOSPITALS OF LONDON.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.—MORGAGNI. *De Sed., et Caus. Morb.*, lib. 14. Proœmium.

GUY'S HOSPITAL.

(OUT-DOOR MATERNITY.)

TWO CASES OF TRANSFUSION IN CHILDBED.

(Under the care of Dr. J. B. HICKS.)

CASE 1. *Hæmorrhage from retained placenta; collapse; transfusion; temporary improvement; death.*—M. W——, aged thirty-one. Had six children; with the last four the placenta adhered. Nearly lost her life upon the last occasion. No history of syphilis. She was delivered of the child on Dec. 14th, 1862, quite naturally. Immediately after the expulsion a violent flooding ensued in one large gush. The attendants administered stimuli, and finding the placenta nearly everywhere adherent, sent for Dr. Hicks. She was then almost pulseless, partly sensible, blanched, with cold extremities, and some jactitation. Dr. Hicks finding blood still flowing from the vagina, and that she had rallied somewhat, cautiously removed the placenta without much difficulty, although both membranes and placenta were adherent firmly over their greater surface; the uterine surfaces in parts largely covered with the yellow albuminoid patches. There was no loss of blood during or after the operation, and the uterus contracted well. Stimuli were given, and she remained in about the same state for half an hour, when the pulse again began to flag, and to be nearly imperceptible, and with much jactitation and collapse. The transfusing apparatus and the husband had been kept in readiness in case transfusion might be required. This appeared the only alternative. Assisted by the resident clerks, Dr. Cook and Mr. Soper, Dr. Hicks injected at three instalments about six ounces of the husband's blood, which quantity was all that could be obtained; the husband nearly fainting, the slowness of the stream necessitating frequent cleansing, whereby considerable waste was sustained. The operation produced a good result for a time. She was able to talk, move with more power, while the pulse improved; but after a short time she became again collapsed. Another attempt to procure more blood failing, she sank two hours after delivery. The apparatus employed was of the funnel and syringe form.

CASE 2. *Accidental hæmorrhage; extreme collapse; transfusion; temporary benefit; version by Dr. Hicks's method; death.*—Mrs. ——, an Irishwoman, aged thirty-eight, very ill-fed, mother of six children. On Jan. 16th, 1863, at full term, she was seized with enormous flooding, and was very shortly in a state of collapse. She was found by the obstetric clerk, Dr. Booth, in a pulseless state, very pallid, and the os uteri open to the size of a crown-piece; by that time the bleeding had ceased. Stimuli &c. were given. No pulse could be felt for an hour, when reaction began, the pulse being thready, at 120 per minute. This continued for another hour, when Dr. Hicks saw her. The os uteri was the same size as before, and unyielding; the placenta could not be felt near the os uteri; there was very slight oozing of blood, and little evidence of collection within. The outline of child and uterus could be plainly felt to correspond. There was still such depression that even vaginal examination caused the pulse to be almost imperceptible. The membranes were ruptured by the catheter. Warmth and stimuli were employed. As it was found upon waiting that the os was gradually expanding, her condition improving, and that the flooding was for the time in abeyance, it was considered advisable not to interfere till the symptoms altered, but to continue to stimulate. For four or five hours she decidedly improved; a slight colour returned, and the pulse considerably improved, so that it was hoped she would struggle through. The os gradually dilated, and moderate pains ensued. By the

end of that time the os was fairly open, but simultaneously she became lower, the pulse being scarcely felt. No external flooding took place, nor could any be recognised as being internal; the fœtus was mobile. No movement brought on any bleeding. She was then so low, notwithstanding stimulants freely given, that Dr. Hicks, to save her life, decided on transfusion from the husband, which was accordingly done, assisted by the resident clerks, Drs. Clarke and Booth. The instrument used was the funnel and syringe. The supply, from a rather ill-fed man, was slow and scanty, but altogether about six ounces were injected. The pulse, before scarcely perceptible, became decidedly improved, and the patient was able to breathe slower and calmer; the jactitation ceased, and she was able to speak strongly. But just at this time oozing of blood took place from the vagina, to an extent slight in itself, but significant; and Dr. Hicks considered that now, some rallying having taken place by the transfusion, and delivery being possible, it was better to run the risk of the depression of delivery than to give any further opportunity for hæmorrhage. The uterus was acting moderately, at rather long intervals. The forceps were therefore partly introduced, but there was so much laxity of the parts, that they did not readily pass between the uterus and head. Dr. Hicks therefore abandoned their use, and employed his method of turning, which was accomplished in a minute or two with great ease. The child was gently brought down, the uterus following closely; but after the expulsion of the child, which had been dead some little time, the placenta was found almost entirely detached. The uterus failed to contract afterwards, though there did not seem to be any fresh hæmorrhage; a very small quantity of dark blood and some small clot were in the uterus, but its date and source were not clear. The hand was passed into the emptied uterus, and a little cold water injected, but without any contraction ensuing. During all the time the patient was well plied with brandy and ammonia, but she soon began to sink. Another attempt was made to transfuse, but the source failed after an ounce was obtained, and while means were being taken to rectify this, it became apparent that the case was hopeless; she sank in a few minutes. From the effects of the transfusion, Dr. Hicks said that he thought that had labour been completed instead of impending, the operation would most probably have been successful.

ST. BARTHOLOMEW'S HOSPITAL.

ACUTE INVERSION OF THE UTERUS.

(Under the care of Dr. GREENHALGH.)

THE two following cases of great interest are reported by Mr. R. Thorne Thorne, midwifery assistant to the hospital:—

Mr. Thorne was called up during the night of the 19th of December, 1862, to render assistance at a midwifery case. It appears that Mary M——, aged thirty-five, the mother of six children, was taken in labour at ten o'clock A.M. on the 18th, and after a natural and easy labour was delivered at half-past twelve A.M. on the 19th of a female living child. Some little hæmorrhage took place after the expulsion of the child, in consequence of which the attendant endeavoured to remove the placenta by traction at the cord about an hour before Mr. Thorne's arrival. The latter gentleman found the patient in an extremely exhausted state, evidently labouring under some aggravated nervous shock. Her face and lips were pale and exsanguine; there was a cold sweat on the forehead and face; she had just fainted and vomited, and on a hasty examination of the wrist no pulsation could be detected. He ordered her some cold brandy-and-water at once, and proceeded to ascertain the cause of the symptoms.

On the bed close to the vulva, in a pool of blood and numerous clots, lay the placenta, still partially adherent to some body within the vagina. On passing his hand into the vagina, he found the whole cavity of the pelvis, which was very capacious, occupied by a firm globular tumour, which was pressing forcibly on the perineum. No uterus was detected above the pubes by the hand applied over the abdominal parietes; but the extremities of the fingers of his hand within the vagina could easily be felt. He at once detached the placenta, which was then only adherent to the extent of about two square inches (the entire surface had, however, evidently been forcibly detached), and then with the back of his flexed fingers he endeavoured to replace the inverted organ, and after about four minutes' continual firm pressure it began to yield, and at last resumed its natural position, his hand occupying its cavity. The attendant and Mr. Thorne then kept up digital pressure over the uterus for about an hour and a half, on account of repeated oozings of blood, the patient taking during this time about half a pint of brandy and some infusion of ergot. She complained of great dizziness and of noises in her ears; but arterial action being re-established, and the hæmorrhage having entirely ceased, a firm pad was applied over the uterus, and left.

The next morning she felt much better, and had a far less anæmic appearance than on the previous night. She complained of great debility and great pain in the head, especially across the brow; skin warm and moist; pulse 68, full volume, very soft and compressible; tongue nearly clean. Has had no sleep.

From this time she gradually improved, taking nutritious diet and tonic medicines, and on the 3rd of January she was able to get up, and has since then gradually resumed her household duties.

POST PARTUM HÆMORRHAGE; TRANSFUSION; SUCCESSFUL RESULT.

(Under the care of Dr. GREENHALGH.)

Having been summoned to a midwifery case on the 11th January, 1863, Mr. Thorne found that a fœtus had just been expelled, which was the result of about seven months' gestation, and had evidently been dead for some considerable time. The patient subsequently told him that for the previous six weeks her health had been much impaired; she had become very weak, and had felt no fœtal movements. The breasts also, which had been well developed, had become flaccid and pendulous, and the attendant had ascertained previous to the birth of the child that the uterus did not rise above the umbilicus. In a few minutes, symptoms of internal hæmorrhage came on, and firm pressure was made over the uterus in order to expel the placenta. This was done three times, and each time it was followed by a considerable gush of blood. Mr. Thorne consequently introduced his hand into the uterus, and finding the placenta nearly entirely adherent, he detached it, and having placed a firm pad over the uterus, all hæmorrhage ceased. The patient, however, was nearly pulseless, exceedingly pallid, and evidently suffering from the loss of blood, and in consequence some cold brandy-and-water was administered; on account of vomiting, however, it was discontinued. She gradually got worse and worse; twice breathing ceased, but it was easily restored by an attempt at artificial respiration. In the meantime an enema syringe was obtained, and about half a pint of hot brandy-and-water injected into the rectum, but without any effect; and then, seeing that she was evidently dying, Mr. Thorne proposed to her friends, as a last resource, the operation of transfusion. It was at once consented to, and a young woman having volunteered to give up a little blood, the assistance of Mr. Vernon, house-surgeon to the hospital, was obtained, and the operation was performed; but owing to the loss of some blood and the young woman fainting, they were only able to get about two ounces into the patient's median cephalic vein. This, however, seemed just sufficient to stimulate the heart to renewed action; for before they began, life was all but extinct, and the pulse at the radial could scarcely be detected, whereas ten minutes afterwards the pulsations of the temporal artery were very distinct.

During the next six hours she had two injections of hot brandy and strong beef-tea, and after this she was fed about every quarter or half hour for the next forty-eight hours.

On visiting her twelve hours after the operation, Mr. Thorne found her complaining of considerable thirst and pain in the head; the tongue was dry, and covered with a thin brown fur; pulse 112, rather full and sharp.

All symptoms of reaction soon passed off. She was kept for ten days on strong fluid nourishment. On the eleventh day she ate a mutton chop, and since then she has steadily improved, and at the present time only complains of debility.

TUMOUR IN THE RIGHT FLANK. PROBABLY INVOLVING THE CÆCUM.

(Under the care of Dr. FARRE.)

This was an instance of tumour in the right hypochondriac region in Phyllys D——, a woman aged seventy-six, who was admitted upwards of a year ago with bronchitis. A firm and hard swelling was observed of the size of a large fist; it was movable, and not painful. The bowels were regular. There was a fulness below and also above, between it and the liver;

yet the tumour did not extend from the liver, as that viscus could be readily defined. There was no projection of a kidney posteriorly, and Dr. Farre inclined to the opinion that it involved the cæcum. She was examined by Dr. West. The tumour remained quite stationary during the patient's stay in the hospital, and when the bronchitis was relieved, in the middle of August, she left.

ST. GEORGE'S HOSPITAL.

GREAT ABDOMINAL DISTENSION PRODUCED BY NUMEROUS FIBROUS POLYPI OF THE UTERUS; FATAL TERMINATION.

(Under the care of Dr. ROBERT LEE.)

JANE S——, aged thirty-five, was admitted on June 30th, 1862. For six years before admission the catamenia had been regular, but profuse and painful. Three years ago she noticed that her abdomen was enlarged and hard, but paid no attention to it. The swelling gradually increased for two years, till the whole abdomen became distended. For the last twelve months there has been no increase; and for six months a little thick, yellowish discharge from the vagina. She never felt pain or hardly any inconvenience up to three weeks ago, when she was suddenly seized with severe burning pain in the sacral region, shooting round the hips to the hypogastrium, and down the inside of the thighs. The pain continued for three days with scarcely any intermission, and was accompanied by a thin, brown, offensive discharge from the vagina. Hot fomentations removed the pain for a time; but it has recurred frequently since the setting up of the discharge, with rejection of food. The day before admission, a soft solid lump escaped from the vagina. She was admitted under Dr. Barclay, and remained under his care for two days; she was then transferred to Dr. Robert Lee. She then measured round the abdomen at the umbilicus, forty-seven inches. Several solid pieces had been discharged from the vagina, horribly offensive, with much thin, brown liquid. The pains were slight, and there was no sickness. The abdomen was distended by a hard, defined tumour; no fluctuation was detected in it. In the umbilical region there was a cup-shaped hollow. The tumour was adherent to the right side, apparently not to the left. The lineæ albicantes were well marked on both sides. The breasts were natural.

On examining internally, a pretty firm membranous mass protruded about two inches from between the labia; it filled up the vagina, and reached into the os uteri as far as could be felt. The os uteri was open to the size of a crown-piece. As much as possible of the mass was removed with the hand; it was horribly offensive. She felt much easier afterwards. Disinfectants were employed to remove the odour; her bowels were well relieved; and wine was ordered for the next three days. The discharge was principally a thin brown fluid. One or two solid pieces passed. She was suffering very little pain; had occasional vomiting. On the 8th of July another internal examination was made. The os was found high up, open, hard, and irregular; the posterior lip and the upper part of the uterus were enlarged and heavy. Round the umbilical region she measured forty two inches. She was very weak during the day. The vomited matter was green. Hydrocyanic acid and soda mixture was ordered every four hours, with good effect.

July 10th.—She had a good deal of pain in the left iliac region, increased by pressure. It ceased after the exhibition of one grain pills of opium.

15th.—She passed a very restless night, suffering much from pain; tongue furred; skin hot and moist. Besides medicine, she was ordered five ounces of brandy daily.

17th.—The patient was better to-day; no feverish symptoms. A large mass of foul sloughing organized matter, like a fibrous tumour, was discharged with much pain.

22nd.—Countenance sallow, with expression of great anxiety; respiration hurried; pulse 124. On the left side of the abdomen, near the short ribs, there is a large, hard, defined mass. On the right side, from the ribs to the pelvis, there is resonance. On examining internally, a large mass was found filling up the vagina. The os uteri could not be felt. She does not complain of tenderness or pain in the abdomen.

23rd.—Much weaker; skin and extremities cold; feet and legs œdematous. She is hardly able to move herself. A great quantity of matter is discharged from the vagina. She is perfectly conscious; feels no pain. She gradually got worse and worse, and died quietly.

Autopsy, eighteen hours after death.—The body was corpulent, abdomen swollen, and feet and ankles œdematous. There were firm old adhesions in the right pleura. Lungs healthy. The heart was flabby, but otherwise normal. The abdominal cavity was filled by a tumour of great size. This occupied a central position, and reached from the liver above to the bladder below. It was of an irregular pear shape, having many nodular excrescences upon its surface. When removed, it was seen to be the uterus. The ovaries and tubes were attached to each side, and were healthy. On section, the walls of the uterus were seen to be thickened, and they imbedded many fibrous tumours, which occasioned the projections from the surface. The interior was distended with a number of blackish elongated masses, which had separate attachments to the upper and back part of the uterine wall, and hung down, many of them reaching through the os into the vagina. The os had thus become greatly dilated; but its texture was natural. Some of the masses were cut open. Beneath the surface, which was fetid and sloughy, they were found to consist almost entirely of rather loosely arranged white fibrous tissue. The dilatation of the uterus was very irregular, as it had assumed a twisted position in the abdomen. The vagina was healthy. The spleen was rather large, and contained a small fibrinous mass. The intestines and folds of the peritœum were glued together by flakes of recent lymph.

CHARING-CROSS HOSPITAL.

CASE OF INTRA-PELVIC ABSCESS, ENDING FATALLY.

(Under the care of Dr. WILLSHIRE.)

SARAH H——, aged twenty-four, admitted October 1st, 1861, states that she had previously been in the hospital for some abdominal disease, and had been for a length of time under treatment for an affection of the womb. She is married, but has not had any children. She has been unable to leave her bed for some weeks. Is intensely pale, with œdema of both legs, but the left leg and thigh are more swollen than the right. Cannot get any rest at night. There are sometimes as many as from twenty to thirty calls to pass motion during the day, the evacuations being fluid and scanty. There is very severe pain in the bowel when evacuating its contents, and extremely severe pain upon pressure over the left iliac region. When the left leg is moved this pain is augmented. Nothing was elicited by a rectal examination. The condition of the patient seemed most precarious, and as the abdomen was becoming tympanitic, and the pulse very small and thready, a palliative and supporting treatment was chiefly contemplated. Nourishing diet was ordered, and a pill containing bismuth and opium was given thrice a day, along with an ounce and a half of the decoction of bail; fomentations and poultices were directed to the abdomen. By these means the irritability of the bowel was materially diminished, and the patient expressed herself as having derived much relief. In a few days' time, however, the left iliac region became more painful, and an obscurely limited projection could be felt in the left groin. Poultices were applied to it. It slightly increased, had a blush of redness upon its surface, and at length an obscure fluctuation was perceptible. Dr. Willshire stated the case to be clearly one of intra-pelvic abscess, and, at his request, Mr. Canton opened the projection in the groin, from which a stream of pus was immediately ejected. The same evening, after straining at stool, pus was discharged per rectum, to the great relief of the patient. It was now plain also that perforation of the lower bowel had ensued. At first hopes were entertained from the relief thus given that the patient might yet recover. Highly supporting diet was ordered, and ease sought to be obtained by the employment of full doses of the sedative solution of opium. Pus was freely evacuated both from the groin and bowel. But matters became worse. The patient lost her appetite, and became intensely emaciated; bed-sores formed, and she remained for some days longer in a semi-conscious or half delirious state upon the water-bed, when death put an end to her sufferings, a month after her admission.

The autopsy showed that a diffused abscess of the left iliac fossa had existed.

INDIAN STATISTICS.—The Bengal Council have resolved on the provision that a medical officer of health for Calcutta shall be appointed, that births, marriages, and deaths shall be registered, and that a periodical census shall be taken. The present authorities seem to be taking the best means of rendering the city as clean and healthy as possible.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

TUESDAY, FEBRUARY 24TH, 1863.

DR. BABINGTON, PRESIDENT.

REMARKS ON TWO CASES OF KELIS.

(With Photographs and Coloured Drawings.)

BY DEPUTY INSPECTOR GENERAL T. LONGMORE, PROFESSOR OF MILITARY SURGERY, ARMY MEDICAL SCHOOL.

THE writer referred to the paper by the late Dr. Addison, in the thirty-seventh volume of the Society's "Transactions," on the Keloid of Alibert, and on that form of Kelis which he (Dr. Addison) considered to be of a distinct character, and which he designated True Keloid. The two cases now brought to the notice of the Society were very striking illustrations of these two forms of keloid disease; but the writer was led to question whether evidence was not afforded by them that they were only simple varieties of one and the same affection, dependent upon the same keloid constitution of the dermal tissue, and owing their different features solely to the differences in the exciting causes.

In the first case the disease was developed after punishment by flogging, of a comparatively light nature. There was scarcely any laceration of the skin. About three months after the date of punishment the soldier noticed a growth upon the spot where the flogging had been chiefly received. This growth gradually increased from a small round tubercle to a large flat mass, nearly as large as a man's hand. It was not accompanied with pain, but there was irritability, itching, and tenderness, when the part was subjected to the pressure of the cross-belt and weight of the knap-sack. On the front of the patient's chest were several small tumours, evidently of the same nature, but the date of the first appearance of these growths could not be ascertained.

The disease in the second case was more extensive than had been described by any writer hitherto, and presented a most remarkable appearance. It was of the kind which Dr. Addison considered should be separated from the former variety under the name of "true keloid." The patient, a cavalry soldier of strong powerful frame, went to India with his regiment in November, 1857. Five months afterwards, at the commencement of the hot season, he began to suffer from lichen tropicus, in common with all the other men of the regiment. About a month afterwards the keloid disease began to show itself, in the form of a few prominent red tubercles on the right forearm. It next appeared over the middle of the sternum, and thence extended gradually toward the two sides of the body. At the same time it appeared on the left shoulder and various parts of the back, and continued to spread until it had covered the entire dorsal surface of the body. The skin of the face was also affected.

The physical characters and accompanying symptoms of the disease in both instances were fully described in the historical accounts of the cases presented to the Society. Their charac teristic features were represented in the drawings and photographs.

The writer urged that no two more striking examples of the two species, "true keloid" and "spurious keloid," according to those who designate them as distinct species, could be met with than the cases brought to the notice of the Society. He argued, however, that, in the case in which the kelis was excited by flogging, the comparative slightness of the punishment, the rarity of such a consequence, but more particularly the presence of the keloid spots in their favourite habitat—the skin covering the anterior part of the chest,—established the constitutional nature of the disease, just as fully as it was established in the second case, where it appeared to follow the excitement of the prickly heat. The fact, too, that the general characters of the diseased growths in both instances were alike, and that in each instance the hypertrophy was greatest where the pressure of the cross belt was chiefly exerted, confirmed still further the identity of their nature. The deduction was hence drawn, that, both the patients being of a keloid diathesis, the difference in the mode of distribution, and in some of the features, of the diseased growths in the two cases could be accounted for by the different natures of the exciting causes.

No treatment had appeared to exert permanent beneficial change in either case. The fact that the pressure of the cross belt acted in each instance as a stimulus to increased growth was held to be a sufficient argument against treatment by continued pressure, which had been recommended by some surgeons. The evidence of the constitutional origin in the case where the chief tumour was isolated upon the left shoulder, as well as the nature of the immediately exciting cause, had counter indicated any attempt at cure by extirpation.

Mr. PARTRIDGE asked Mr. Lee to give the result of a case of kelis, on which he had operated some years ago.

Mr. HENRY LEE said that in that case the arms were bound down to the side by contractions of the skin from the disease. There were, however, no interstices. He divided the adhesions, but interfered with the kelis as little as possible. The result was very satisfactory.

Dr. GREENHOW said that a few months ago he saw a young lady who had had a small tumour removed from the shoulder. The cicatrix became hard, and increased in size. It was removed three times, but it recurred again, and when Dr. Greenhow saw her last there was a pink, hard, and elastic swelling. He advised that it should not be again removed. He found that she had had a number of boils, and that the scars left by all of them had become hard. The small tumour on the shoulder formed in the site of a boil.

Mr. CURLING considered Mr. Lee had been fortunate in his case, as keloid disease generally returned in the cicatrix after excision. Some years ago, he had under his care, in the London Hospital, a case of extensive keloid growth in the cicatrix of a burn on the neck and chest, in which steady pressure and other means were tried without success. The friends wished something more to be done, but, before venturing to excise the whole of the disease, he removed a small isolated growth, but it returned, and he therefore declined to perform any further operation. The case afterwards came under Mr. Skey's care at St. Bartholomew's Hospital, and was operated on there, but he did not know with what result. Mr. Curling doubted whether the two cases described by Mr. Longmore were genuine examples of the two forms of keloid disease described by Dr. Addison. Both appeared to him to belong to the form called spurious keloid, though the second did not arise from any injury to the skin. He spoke with some reserve, as the diseases were rare, and he had witnessed only one case of the true keloid. He differed from Mr. Longmore in regarding the diseases as quite distinct, and therefore regretted that the same term, keloid, had been applied to both of them by Dr. Addison. In the true keloid, the skin was extensively affected, became like parchment; the part was "hide-bound" and shrunken. Such was the condition in the case he had witnessed, where the side of the face, the neck, and both arms were affected, the motion of the limbs being impeded. In both cases described by Mr. Longmore the skin was hypertrophied, and tubercles or swellings existed.

Mr. PARTRIDGE mentioned the case of a young lady who had had boils, in the scars of which were little tumours. One the size of a pea was removed, but the disease returned in the scar of the incision, and also in the scars of the punctures used in closing the wound. The disease was again removed, but it returned.

Mr. LONGMORE then replied. He said that, on reading Dr. Addison's paper, he had been convinced that his cases were of the varieties mentioned.

AN ESTIMATE OF THE EXTENT TO WHICH HUMAN LIFE HAS BEEN PROLONGED OR ABRIDGED BY OVARIOTOMY.

BY ROBERT LEE, M.D., F.R.S.

DR. LEE, after stating that statistical tables of ovariotomy have been compiled with great labour at different periods by various eminent individuals, proceeds to analyze the tables of Dr. Clay published in 1860, which comprise in all 567 cases. Of these, 242 were considered successful, and in 235 the patients died from the direct effects of the operation. If 477 cases be deducted from 567, there will remain 90 cases. Whether, however, life was prolonged or abridged in these cases, Dr. Lee cannot state, as he has been furnished with no information on the subject. The author avers that since 1860 the operation of ovariotomy has been performed in numerous cases in Great Britain, and that a number of fatal cases have occurred of which no report has been published. In illustration of this statement, he gives brief accounts of thirteen unsuccessful cases, not hitherto published, of which he has obtained information. Dr. Lee concludes his remarks with the statement that he considers it demonstrated that ovariotomy is an unjustifiable operation where the life of the patient is not in immediate danger, and where there is not a great probability of the life of the patient being saved by the removal of the disease.

Mr. MACILWAIN thought that what was wanted was more accuracy in diagnosis, and had no doubt that there had been even worse mistakes than Dr. Lee had enumerated, and that a great many had died from a want of knowledge of certain circumstances previous to operation. He considered that the facts required to decide a question so important could not possibly be gathered by a single person, however large his experience might be. But by a vigorous action of this Society, enough facts might be accumulated in a few years from which more definite conclusions could be drawn. He thought this disease ought to be studied from the laws of general pathology, and he felt convinced that the danger of removing the ovary had been exaggerated. He had observed that Mr. Spencer Wells, in his paper on the subject, seemed to regard the after treatment as the Alpha and the Omega. It was to be repose. Then Mr. Spencer Wells had given him the addresses of twelve women, residing in the suburbs, who had been operated on, and who are now quite well. He had seen ten of these cases, and he felt convinced that the question of ovariotomy was worthy of most serious consideration, and that it should not be the subject of mere hostile interchange of opinions. The first case he saw (and he would add that they were all pretty much alike), was a young woman from whom Mr. Wells had removed a tumour weighing forty pounds. She and the other nine were quite well. He regretted very much that he had not had the pleasure of Dr. Lee's company. In conclusion, he begged respectfully to suggest to the Council that they should issue a series of questions for the collection of information on cases of these operations. In two years, he thought, a sufficient amount of evidence would be obtained.

Mr. BAKER BROWN stated, that so far from finding fault with Dr. Lee for bringing this subject so frequently under discussion, he felt extremely obliged to him for so doing, feeling convinced that the greater the investigation the greater must necessarily be the elimination of truth; that he (Mr. Brown) had openly and frankly published every unsuccessful case which had occurred in his own hands, and he believed, as a rule, other ovariotomists had done the same; that he had performed the operation fifty-three times during the past twelve years, the result being twenty-nine recoveries and twenty-four deaths; that, as far as he knew, only two of these had subsequently died—one from fever after making a perfect recovery, the other from the recurrence of the disease in the other ovary, which at the time of operation was perfectly healthy, and which, as he understood, had lately been removed by another gentleman, and followed by death in three or four days. The mortality of his practice of late years had been very much less than during the first years, as evinced by the fact that, in the London Surgical Home, of the thirty-one operations performed, there had been only ten deaths; and of the last fifteen operations there and in private practice, he had only had four deaths. Mr. Brown had been surprised to hear Dr. Lee assert that some speaker on the last occasion on which Dr. Lee had brought this subject before the Society had stated that the operation was simple and not dangerous. Mr. Brown, on the contrary, believed it to be the most dangerous operation that was ever performed; so dangerous, indeed, did Mr. Brown consider the operation, that he never on any occasion advised a patient to have it performed; that he placed the facts of the case frankly and fairly before the patient, and having done so, left her, assisted by her friends, alone to decide; and although easy of performance, it could not be called a simple operation, as the complications were often of the most serious nature. It was not an operation requiring great surgical skill, but plenty of nerve. Mr. Brown observed, that the most important part of the question was that of diagnosis; that although he had devoted more than thirty years of his life to the careful study of this subject, and had paid especial regard to the question of diagnosis, he unhesitatingly affirmed that there were no rules which could be laid down so absolute as to enable any surgeon to diagnose with perfect certainty before operation. He would, therefore, express a strong hope that Dr. Lee would continue to give his great powers of mind and investigation to the solution of this most difficult problem, believing that he would thereby do more good service, and strengthen the hands of the operating surgeon, than by any further attempt to discourage ovariotomy. Dr. Lee stated that he had inquired of a surgeon whether, if he were a woman, he would have submitted to the operation, to which inquiry no answer had been returned. Mr. Brown observed that he could not enter into the question in the way placed by Dr. Lee; but he could assert that ten years ago he had performed this operation on his own sister; that she had since married, had lately been confined in New Zealand of her fifth girl, and had never had any illness from the date of the operation; that he should, if occasion arose, follow the same plan in anyone near or dear to him, if it were a case suitable for operation. Therefore, in conclusion, Mr. Brown observed that he did consider this operation justifiable, and it ought to be recognised as a legitimate one in surgery.

Dr. TYLER SMITH said that the fatal case in his practice to which Dr. Lee had referred was very inaccurately stated. It was not a case of ovarian disease at all, but of cancerous tumour of the mesentery. The patient was in extreme danger at the time, and had been warned of the probable result of the attempt at operation. He thought it unfair that Dr. Lee should bestow so much time in seeking out the unsuccessful cases, while he paid little or no attention to those which were successful. This plan was as unreasonable as it would be to test any point of medical or surgical practice by visiting a cemetery. Dr. Lee maintained, as one of his chief grounds of objection to the operation, that in many cases of ovarian tumour the progress of the disease was so slow that, taking those who were killed by the operation and those who recovered into account, the average duration of life was not on the whole prolonged by ovariotomy. On this point his opinion deserved every possible attention. All knew that occasionally cases were met with, where tapping was borne a great number of times, or where the tumours remained almost stationary for many years, so that such patients might, and sometimes did, actually reach the ordinary term of life. In the greater number of cases the progress of disease was, however, more rapid, and a time sooner or later came in which life was threatened, and interference either by tapping or removal became necessary. Still the facts respecting the occasionally chronic character of these tumours, as insisted on by Dr. Lee, ought to be well weighed in regard to the operation in every given case. They had undoubtedly an important bearing on ovariotomy. Mr. Spencer Wells had, on the last occasion on which the subject was discussed by the Society, said, in reference to this point, that ovariotomy did not differ from other operations, and that the healthier the patient at the time of the operation, the greater were the chances of success; while Mr. Hutchinson maintained that the earlier it was performed the better. He (Dr. Tyler Smith) held a different opinion. There was a great peculiarity about ovarian disease—namely, that, beyond the material abstracted from the system, it was only injurious by mechanical pressure. These tumours did not otherwise threaten life. It was not therefore right, in his belief, to operate until the health began decidedly to give way. Of course we ought not to wait till the health was so completely broken as to destroy the chances of the success of the operation. But there should be unmistakable signs of mischief from further delay before we were justified in resorting to ovariotomy. Otherwise there would be many cases of success, but mixed up with them would be cases of women cut off suddenly in the prime of life, merely the subjects of mechanical discomfort, and who but for the operation would have lived many years. Such cases must cause great regret to any operator. He believed that, as regarded the prospect of operating successfully, we did not lose anything by waiting till the disease had begun to threaten life. There was a well-known axiom of John Hunter, that "health bears disease ill." This might be applied to surgical operations, and persons in good health did not, according to his (Dr. Tyler Smith's) experience, bear ovariotomy so well as those who were in a lower condition. In the latter there was far less risk of peritonitis; and it was acknowledged that women between fifty and sixty years of age, who had passed the meridian of strength, recovered better than the young or middle-aged. Nor was anything lost by waiting. The only evil of such delay as he recommended was the possible formation of adhesions; but even these adhesions did not greatly diminish the chances of success. At all events, we ought not, for fear of their occurrence, to expose women in fair health to the chances of a sudden and violent death. The objections of Dr. Lee were not then, in his opinion, sufficient to condemn the operation, but only its indiscriminate performance. He had as far as possible gone upon the principles now laid down, and out of fifteen cases twelve had recovered; and he had only made the one error of diagnosis in the case adverted to by Dr. Lee.

Mr. SPENCER WELLS repudiated altogether the practice attributed to him by Dr. Tyler Smith, of performing ovariotomy in all stages of ovarian disease. In both the papers which he had read before that Society, and in one read before the British Medical Association at Canterbury, he had stated his belief, as clearly and strongly as he could, that, while it was wrong to put off any serious operation until the health of the patient was so broken down that there could be no reasonable hope of success, on the other hand, it was wrong to advise any patient

to submit to any serious operation unless her life was seriously endangered by the disease. It was by care in the selection of cases that the judgment of the surgeon must be tested. If he performed ovariotomy before it was rendered necessary by the progress of disease, he would often lose patients who might live for years without operation; but if he did not operate till the disease was very far advanced, his operations would be unsuccessful because they were performed too late. In all his own cases he was guided by these considerations, and there was no foundation for the statement that he performed ovariotomy indiscriminately. Some of Dr. Lee's arguments were also very unfair. He had alluded to one case in which death had followed an incision made into an ovarian tumour at the Westminster Hospital. He (Mr. Wells) knew nothing of the case; but it was obviously wrong to call that case one of attempted ovariotomy because the operator chose to tap with a scalpel instead of with a trocar, in order to empty a cyst more completely of viscid contents. This had to be done occasionally to give temporary relief in cases where ovariotomy could not be thought of. Then Dr. Lee ignored altogether the fact, that fatal cases after tapping are constantly occurring, but no one thought it worth while to record them. It was said to be the natural progress of disease, which tapping could not check. But patients frequently died in a few days, or a few weeks after tapping, whose lives probably might have been saved by ovariotomy. Dr. Lee had shown a great industry in collecting unrecorded cases of failure, but nothing would induce him to see patients who had recovered after ovariotomy, and remained in good health. In reply to a request from Dr. Lee, he (Mr. Wells) had given him, some weeks ago, the names of twelve patients, all living within three miles of Savile-row, and told him he could see them at his own time. Dr. Lee first arranged to see them with Mr. Macilwain; but at last Mr. Macilwain was obliged to go alone, and Dr. Lee had not seen one of these patients. It was as unfair to ignore successful cases and make fatal cases only known, as the opposite error, with which Dr. Lee so pertinaciously charged his opponents. Doubtless, some unsuccessful cases had not been reported; but the same might be said of successful cases. That very morning, Dr. Royle, of Manchester, had called upon him (Mr. Wells), and told him of two successful cases which he had not published. In addition to the statistics given by the two previous speakers, Mr. Wells stated that, besides one case in which he had performed ovariotomy for the second time on one patient, he had operated in fifty-five cases, with a result of eighteen deaths and thirty-seven recoveries. In his later cases his success had been much greater than in his earlier cases; for of the last twenty cases eighteen had recovered, and only two had died. These facts were quite enough to prove that the time had passed when an operation performed with such results could be denounced by any man of sound judgment as "unjustifiable." Mr. Wells concluded by expressing the hope that the Council would adopt the suggestion of Mr. Macilwain, would appoint a committee, and would instruct that committee carefully to inquire into the condition, years after operation, of those patients who had recovered.

Mr. CHARLES HAWKINS urged on the Society the adoption of Mr. Macilwain's proposition. He considered that there was a tendency to regard the operation with greater favour than before. He agreed with Mr. Baker Brown, that the question should be fairly stated to the patient. It was a very remarkable thing that the leading surgeons had not expressed any opinion on the subject. He had attended all the discussions in the hope that they would; but, with the exception of those who had made diseases of this class a specialty, not three of the leading surgeons had said anything either for or against the operation. He was surprised that so little attention was paid to the fact, that women with ovarian disease often live a long time. In one instance a patient lived twenty years, and was tapped three times in that period. There was this in favour of the operation, that, if the patients got well, they kept well; but then, in the unsuccessful cases, many might have lived with the disease who were cut off by the operation. Mr. Spencer Wells had spoken of patients frequently dying after tapping, but he thought this was really rare. It was quite clear that what was wanted was greater certainty in diagnosis, and also a better account of patients who have been left alone. He did not see any harm in finding out unsuccessful cases, and thought it not wrong to go to churchyards to study diseases. He concluded by seconding Mr. Macilwain's suggestion.

Mr. CURLING did not think the remarks made by Mr. Hawkins respecting the silence of hospital surgeons should pass without receiving some reply. The fact was, only a small number of operations for ovariotomy had been performed in the metropolitan hospitals. With the exception of one large hospital, it was only in recent years that an obstetric department had been attached to these institutions, so that comparatively few patients labouring under ovarian disease apply there for relief. They resort chiefly to obstetric physicians, and to surgeons who cultivate a special department of practice—the diseases of women. It has been questioned whether a large hospital is the best place for the performance of this important operation, and certainly no surgeon would be justified in undertaking it whilst pyæmia or erysipelas prevailed in the wards. Then, the applications for the admission of other cases are so pressing, that it is sometimes difficult to devote a ward solely to a case of ovariotomy. On a recent occasion, at the London Hospital, his colleague, Mr. Maunder, had to wait some weeks before he could obtain a suitable ward for the treatment of an ovarian case. Hospital surgeons, however, did not shrink from undertaking these operations in suitable cases, sanctioned by their obstetric colleagues. Four operations had been performed at the London Hospital, two of which were done by himself. He believed that the particulars of them had been published. One was successful, and three died. The reason why hospital surgeons did not take a prominent part in these discussions on ovariotomy was, because they could speak only from limited experience.

Dr. LEE said his attention had been called to ovariotomy at an early period, in consequence of a fatal case having occurred, in which a fibrous tumour of the uterus was mistaken by another physician for a tumour of the ovarium, and removed. He (Dr. Lee) resolved to investigate the whole subject of the pathology of the ovaries in relation to this operation. With this view he examined carefully every case of ovarian disease that came under observation, preserved accurate written histories, and where death took place the bodies were examined, for the express purpose of determining whether life could have been preserved by ovariotomy. This, he conceived, was the only method by which a knowledge of the diagnosis and prognosis and treatment of ovarian disease could be acquired. Dr. Lee said that he had published 170 cases, and could now communicate double that number. The result of all these inquiries was, that it was impossible in any case to determine before actually laying open the abdomen what the condition of the viscera was, and hence it was not justifiable to perform such a dangerous operation in the dark or at a venture. He thought it most unphilosophical to set aside the experience of the whole world during a long course of years, and now to substitute in its place the experience and the marvellous and boasted success of a few practitioners during the last two years. The tables referred to in the paper contained abridged histories of 567 cases of ovariotomy—all that had occurred from the period of the first operation in America, about forty-five years ago, up to February, 1860. Of these 567 cases, 242 were stated to have been successful; and 235, or about one half, died speedily after the operation. There then remained 90 cases wherein the operation of ovariotomy was performed, the greater number of which might justly be added to the list of fatal cases, though they had been included in the list of recoveries. The fact being now universally admitted that the diagnosis of ovarian disease was most difficult, the prognosis uncertain, and the operation of ovariotomy fatal in a large proportion of cases, or 50 per cent., he (Dr. Lee) continued to think that it was unjustifiable, except under the circumstances stated at the conclusion of the paper. The personal remarks which had been made he considered it unnecessary again to notice. No one had ventured to impugn the accuracy of the statements made in the paper. In the course of his observations, Dr. Lee said he considered it not only unscientific, but an inhuman act, to publish all the successful and conceal many fatal cases; and added that he had performed the operation of ovariotomy frequently on the dead body, but never on the living subject. He had, however, recently witnessed the performance of the operation by Mr. Spencer Wells, and a most horrible sight it certainly appeared. The bowels gushed out of the wound, reminding him of the fate of Judas Iscariot. Yet the patient was reported to have recovered; thus showing how very great an injury might be inflicted on the abdominal viscera without causing death, which he considered a striking physiological phenomenon. Some of the occurrences which had taken place during the last twelve months he considered an opprobrium to surgery and midwifery. In a case which occurred some years ago in St. George's Hospital, Dr. Lee stated that he had called a consultation of the surgeons, observing that if the operation was ever to be performed, this was a proper example. The surgeons refused to operate, unless Dr. Lee gave his sanction, which he could not do conscientiously, believing the patient's life to be in no im-

mediate danger. This young woman had been operated upon by Mr. Spencer Wells, and she was now alive. More recently a case of ovariotomy had occurred at St. George's Hospital, but he (Dr. Lee) never saw the patient, and was not called upon to give any opinion respecting the operation, and therefore was in no way responsible. In conclusion, he referred to a case that had occurred to Mr. Spencer Wells the day before, and respecting which it had been reported to him that it was ascites, and not ovarian dropsy.

Reviews and Notices of Books.

The Nature and Treatment of Gout and Rheumatic Gout. By ALFRED BARING GARROD, M.D., F.R.S., Physician to King's College Hospital, &c. Second Edition, enlarged and carefully revised. pp. 618. London: Walton and Maberly.

WHEN Dr. Garrod's volume first appeared, we discussed it at sufficient length (*vide* THE LANCET, vol. ii., 1859, p. 645) to place all the prominent doctrines of the author summarily before the reader. As these remain the same in the present edition, we need not allude to them further than to point out such as have received extended support by fresh illustrations in the present edition. In the first place, then, we may observe that within the last two years the author has had the opportunity of more extended inquiry into that permanent stiffness or complete anchylosis which occasionally follows acute gout, even upon its first invasion of the system. This anchylosis may ensue with but slight local inflammation, and along with but little enlargement of the joint, though it be attended by serious changes in the deeper structures of the latter. The author's recent experience warrants him in asserting that a patient, although free from all appearance of deposits, may have complete rigidity of the ball of the great toe, the result of but a few fits of acute gout; whilst, upon the other hand, persons may suffer repeated attacks, and yet no very perceptible rigidity ensue, although the structures of the joint shall be found considerably affected. Within the last two years the author has examined the condition of the structures entering into the joint of the great toe in two instances of anchylosis, and which will be found described and delineated in Chapter VII. Since the table was constructed to illustrate the determination of the state of the blood in cases of gout, Dr. Garrod tells us he has had "numerous opportunities of comparing the results therein contained; but those already tabulated are quite sufficient to prove my original statement, that *the blood in gout is invariably rich in uric acid.*"—p. 105.

Another point, also, upon which the author feels himself justly entitled to insist, is the presence of a slight amount of albumen as of very common occurrence in the chronic form of the disease. In acute gout it is less frequent, and often disappears after the paroxysm has subsided; but in the chronic variety, it is stated to be usually permanent, although of very variable amount (p. 170). Experience has also confirmed Dr. Garrod in his conviction of the great importance of attending to the state of the urine in reference to the treatment of the disorder. Nor is he less convinced of the truth of his former statement as to the deficiency of uric acid in gouty urine; and that the defective elimination generally bears a close relation to the inveterate character of the malady.

In the first edition of his work, the author, it is well known, proposed the salts of lithia as valuable remedial agents. He now assures us he is satisfied that the carbonate of lithia is a powerful diuretic, in some patients increasing the flow of urine to even an "annoying extent." It is likewise a very powerful alkalizing agent, the urine becoming occasionally distinctly alkaline from the exhibition of five grains dissolved in aërated water. The citrate of lithia has also been employed, and is said to be a valuable salt when the presence of a free alkali in the stomach is not desired. When the author first suggested the use of lithia, he was assured by those most competent to give an opinion on the subject, that it would be almost impossible to procure a single pound of the carbonate of lithia in Europe. The result has been, however, that, notwithstanding its high price, more than a hundred pounds of this drug have already been therapeutically employed in our own country. Useful as it is, yet, writes Dr. Garrod, "I wish it particularly to be understood, that I do not consider lithia will in any way replace colchicum as a remedy for gouty inflammation. It may prove a valuable adjunct; but its chief use is, in chronic gouty cases, to ward off attacks and remove the remnants of the disease. It is likewise valuable when administered as part of the prophylactic treatment."—p. 427.

At page 527 additional proof will be found of the difficulties of making a diagnosis in certain cases of joint disease, and of the great advantages to be derived from the examination of the blood, serum, and the little white nodular concretions often to be observed in the ear.

Finally, in the appendix, we have given to us the results of the experience of Mr. Haviland, of Bridgwater, and Dr. Wood, of Philadelphia, upon the influence of cider and other drinks in producing gouty disorders. Here also may be found recorded some reference to writers who have remarked upon the use of the Bath waters in colic, and on the influence of lead-poisoning in the production of gout.

Dr. Garrod's work is one of the best authorities on the subject of which it treats.

Outlines of Botany, designed for Schools and Colleges. By JOHN HUTTON BALFOUR, M.A., M.D., Professor of Medicine and Botany in the University of Edinburgh. Second Edition. pp. 712. Edinburgh: A. and C. Black. 1862.

THIS work is already so well known that no lengthened notice of it is necessary. In the present edition the author's object has been to give the important facts of botanical science as briefly and popularly as possible, without entering into elaborate explanations. The structure and functions of plants are first considered, then their classification, and finally their distribution both at the present day and at former epochs of the earth's history. A full glossary has been added, with a copious index. Not the least important recommendation of this valuable work is the manner in which the subject has been illustrated by nearly 600 wood engravings. It is justly esteemed as one of our best class-books for the botanical and general student.

On the Situation, Form, and Capacity of the Gall-Bladder in the Vertebrata; on its Absence in certain Animals; and on the Colour of the Bile. By EDWARDS CRISP, M.D., F.Z.S. Pamphlet.

THIS essay contains, in a small compass, more than had previously been written on the subject. The author has examined the gall-bladder of nearly 600 animals, comprising 306 species of mammals, birds, reptiles, and fishes. In the Ophidians, the gall-bladder is mostly far away from the liver. Dr. Crisp found it eighteen inches from that viscus in a python ten feet long. Cuvier states that in the genus *Mus* the gall-bladder is absent, but the author thinks many exceptions to this will be found. With the exception of the pig, none of the Pachydermata have a gall-bladder. It is not always absent in the cameleopard.

We would particularly recommend this essay to the notice of the physiologist and comparative anatomist, containing as it does very much new and original matter on the gall-bladder. It is a small mine of information on the subject.

ROYAL EDINBURGH ASYLUM FOR THE INSANE.—At the annual general meeting, held on the 23rd ult., the President of the Royal College of Physicians, Edinburgh, the President of the Royal College of Surgeons, Edinburgh, Professor Simpson, Professor Syme, and Dr. David Maclagan, were appointed the Medical Board; Dr. Skae was appointed Resident Physician; and Drs. Clouston and Yellowlees, Assistant-Physicians.

THE LANCET.

LONDON: SATURDAY, MARCH 7, 1863.

THE projects in contemplation for intersecting populous town districts by lines of railway-viaduct, have an important bearing upon the public health which ought not to be overlooked when discussing the questions of public convenience and commercial profit. It deserves to be borne in mind that the advantages of public convenience and commercial profit will be felt by a portion only of the community, and that they will be achieved at the sacrifice of the immediate, perhaps lasting, comfort of another portion. It is a question which public bodies, such as local authorities and the Legislature, acting as arbiters between interested projectors and the public, are especially called upon to consider,—whether any portion of the community can rightly be injured in their health in order to advance the material interests of another. We are glad to observe that this question has been brought forward with characteristic earnestness and ability by Lord DERBY. The demand to build up numerous walls, converging from various directions through the metropolis, in order to extend the railways towards the City as a centre, is one not to be lightly yielded to the specious arguments of projectors. We are not without experience as to the effect of railway viaducts upon the property and the comfort and health of the inhabitants of districts traversed by these hideous structures, that disfigure the earth, intercept the light of heaven, and offend every sense of propriety. Let anyone go and study the subject for himself in Bethnal-green and in the south of London. He cannot fail to be convinced that the general effect of these viaducts upon the health and comfort of the poorer classes is most deplorable. No one can take a walk through the parts of Bethnal-green traversed by the Eastern Counties Railway without being painfully struck by the perpetual gloom, damp, and dirt which mark the course of that line. A railway viaduct is essentially a continuous wall obstructing the free passage of air and light. It places the inhabitants near it in a position resembling that of people shut up in a fortified town. The diminution of light is sure to entail a diminution of cleanliness. Many houses are passed on the level of, or above, their first floors, to the serious obstruction of light and air; whilst the basements are so wretchedly gloomy as to be in many cases literally little better than caverns.

The new lines projected to run through various parts of London will certainly inflict similar evils. In the first place, many hundreds of houses will have to be displaced for the construction of the viaducts. This will involve the displacement of many thousands of poor people, who must find dwellings elsewhere. They will, no doubt, be compressed, or squeezed in amongst the already overcrowded population. Two people will have to live, or rather slowly etiolate, where there is now scanty accommodation for one. In the second place, the dwellings of many more people that will be left standing in the immediate vicinity of the viaducts will be deteriorated as regards the essential elements of light and air. Judging from actual experience of London viaducts, it is no exaggeration to say that every house destined to stand within the shadow of the projected viaducts will be condemned to an artificial climate, where the day will be shortened an hour or more by cutting off all the horizontal rays of dawn and sunset which bring most cheerfulness and health to the inhabitants of the humbler tenements of towns. Already the air of London, thickened by mists and smoke, is often impenetrable to the rays of the sun, which a few miles beyond are ministering life and health, and gladdening the hearts of men. To add a purely artificial and unnecessary barrier, that will throw large tracts of the town into deeper Cimmerian darkness, is a sin against society that not even accelerated trains and that *summum bonum* of railway shareholders, five per cent. dividends, can atone for.

And the viaducts are not the only evils threatened. These reckless speculators must needs also invade and demolish the few open spaces that yet remain in the City as breathing-places for the inhabitants. At a time when the most strenuous efforts are being made to secure and extend town-parks and other places of recreation, the very squares are to be used up as stations. Yet these places are of vital importance. Take them away, and the poor children who now seek in them a refuge from confined streets, and find there something to remind them of the free air and space of the country, will be condemned to pine in gloomy rooms, without exercise to develop their frames, without light to invigorate their blood. People who live within reach of the parks at the West-end can with difficulty appreciate the estimation in which the enclosures of Finsbury-circus and Finsbury-square are held in the City. The very existence of children may be said to depend upon the preservation of these spots.

It may be urged by our iron-kings that this undoubted sacrifice of the health of the poor and helpless classes, who cannot select their places of residence, is justified on the ground of the general convenience. But the question at least deserves consideration from those who believe there are other things worth caring for besides money. Is it right that those who are compelled to live in London should be called upon to lay down quietly in the mud in order that other people may trample them under foot in their way from pleasant country abodes into the City?

It is a curious illustration of the confusion that characterizes the measures brought before Parliament, and of the unhappy conflict between private Bills brought by interested schemers and public Bills introduced by Government, that there is actually a measure before the House of Commons having for its object to secure public gardens and places of recreation for town populations. The necessity for a provision has been long urged, and is now deeply felt by all who have the interest of the people at heart. Yet, in the very teeth of this feeling, and in opposition to what may be taken as a recognised principle of public policy, we see a host of projectors coveting the few open spaces and squares that we actually possess for the purpose of converting them into public nuisances. A few months only have elapsed since Leicester-square has been reclaimed from a perverted use, and restored to its original condition, with the emphatic approval of the town. These spaces are too precious to be trifled with. Once turned to other uses, built over, or obstructed, the hope of restoring them as breathing-places is lost. Nor is it likely that new open spaces can be acquired, when we consider the enormous pecuniary value of land for building purposes in towns. The spaces we

do possess must, therefore, be looked upon as sacred trusts which we are bound to transmit untouched to succeeding generations.

We rejoice to see that this important subject has engaged the earnest attention of Lord DERBY, and trust that the corporation, the vestries, the Metropolitan Board of Works, and the Legislature will accept and discharge the full responsibility that lies upon them as protectors of the public health against the reckless encroachments of railway projectors.

THERE are few causes so weak that nothing can be said in behalf of them; and those who have read the letters which we recently published from Mr. WESTLAKE and Mr. HARRY LOBB in defence of themselves and their little special institutions for the cure of ulcerated legs and for galvanic treatment, must have been struck with astonishment at the very little indeed which they had to say for themselves or their institutions. Mr. WESTLAKE could only say that he had cured a great many ulcerated legs, and that Sir BENJAMIN BRODIE approved ophthalmology as a special study. But to strain that concession to an existing fact to make it look like a precedent for further incessant encroachments on the broad field of general surgery, was to put it to a use expressly forbidden, and to apply it to defend special exemption, which constituted part of the general condemnation. It is a kind of sophistry in which every founder of a special hospital delights to indulge, but which can only serve, when exposed, to weaken the defence which is clothed in such borrowed rags of worn-out argument. Neither of these gentlemen ventures to join the issue which is opened by the general voice of professional reprobation. They can neither deny nor defend the injury done to the cause of medical education by these interested gnawings at the wide utility of our great public charities. Mr. HARRY LOBB reduces the matter to a ludicrous issue involving his insignificant personality. With a contempt of logic, and a self-seeking quite accordant with the general impertinence and bad taste of the letter which he relied on our courtesy and forbearance to insert, Mr. LOBB destroys all his laboured defence of this destructive system of institution-mongering by frankly offering to shut up his hospital if the surgeons and physicians of St. Bartholomew's Hospital will admit him as a colleague and give him a ward. Few can doubt the perfect sincerity of this offer—none but must admire its exquisite *naïveté*. Few men could have had the courage so boldly to unmask the personal selfishness which is at the bottom of the foundation of special charities. Seeing that the staff of St. Bartholomew's have not been induced to accept Mr. LOBB'S proposition, and pending the time that their eyes may be opened, he is anxious, not to enlighten the minds of hospital governors as to the necessity (in his opinion) of such wards, not to appeal to the medical profession to urge on the foundation of galvanic wards in general hospitals, supposing that his convictions were likely to be shared,—but whatever becomes of the principle, he is interested in the person; and therefore he feels justified, in the face of professional opprobrium, in pushing his fortunes by founding a Galvanic Hospital. It were difficult for Mr. HARRY LOBB to have more completely destroyed his own case than he has done. He has endeavoured to bolster up his position by hinting that some eminent medical men have expressed their approbation of the Galvanic Hospital. It is unfortunate that he did not give some proof of that statement. It is so easy for gentlemen of Mr. LOBB'S turn of mind to deceive themselves as to the approval of respectable men, that a good deal more than mere assertion is necessary on this head.

Mr. WESTLAKE expresses his disposition to defer to professional opinion. He does not, we presume, doubt that this opinion is decidedly opposed to such institutions as that which he has founded, and now conducts. He may best display that deference by closing his institution.

As to the others whom we mentioned, we can only say of Dr. MORELL MACKENZIE that the epistolary defence which was volunteered by his friend was so outrageously prolix and unusually senseless, that neither of two letters, notwithstanding our desire to make allowance for irritation and wrong-headedness, could, in justice to our readers and our space, be permitted to find place in these columns. We regret that this young man should so early have marred a promising career, and hope that a little time and reflection will lead him to withdraw from the mistaken path into which he has wandered. In this course he will be able to find a precedent in the instance of an older offender—Mr. SPENCER WELLS. It has been represented to us that scant justice was done to that surgeon, inasmuch as he has withdrawn from the institution for Stone, which he had the honour of originating, and to which he long acted as surgeon. It only remains that we should effect due reparation to Mr. WELLS by making known this retrogressive act. It was, however, carried out so quietly that we certainly were quite unaware that Mr. WELLS had deserted his offspring. We are assured that this is really so; and although we have not seen the usual public notices indicative of such an event, the statement is made to us on his behalf from excellent sources. We are not aware whether Mr. WELLS has private reasons for shrouding his retirement in mystery; perhaps he has. Possibly he may have done "good by stealth," and may "blush to find it fame." But it is not altogether desirable, on public grounds, that he should "blush unseen." If Mr. WELLS has retired, his retirement would probably have created a vacancy. It would be interesting to know who may be desirous to take up the mantle which Mr. WELLS has in the dark dropped from his shoulders to the ground. That vacancy has not, however, been advertised, so far as we know; and the motives for not advertising it are perhaps not very difficult to fathom.

CLAIMS for professional remuneration are difficult to determine by any fixed rule. In their estimate many circumstances require consideration which can be appreciated only by those having practical experience in such matters. This is especially the case when the periods of payment are protracted. The public are, perhaps, the least able, as well as the least disposed, to form a dispassionate, much less a generous judgment on the question of accumulated professional charges, particularly when the facts exhibit any unusual departure from the recognised practices of business routine. It becomes, therefore, the duty of every medical man to exercise a sound discretion in his professional relations, that, as far as possible, he may prevent himself being placed in a false position should a necessity arise for the vindication of his demands. It is useless to disguise the fact that at present, incident to our social system, the commercial and professional elements are closely

interwoven. Many men of most honourable minds are of necessity obliged to shape their practice as regards visits, fees, and medicines, to meet the requirements of those amongst whom they are placed. In country districts, more than any other, this is the case. We do not see how it can be otherwise. We feel assured that such necessity in nowise prevents the medical practitioner from upholding his status, independently of the rate of his remuneration or the peculiarities of his position. When, however, professional services assume a special character, it is most desirable that a distinct understanding on the matter be come to, for the mutual protection of both parties principally interested. We are far from counselling our brethren to be hucksters of their fees, or to condescend to that which might not inappropriately be termed "job work." Yet we desire them, where they cannot prevent, to endeavour to guide circumstances, and to have at least some definite notions of the conditions on which their services are rendered. A remarkable illustration of the disadvantages which follow from negligence in this particular was afforded a few days since. We cannot do better than quote the case, together with the observations which accompany it, as reported in the proceedings in the Court of Exchequer, before Mr. Baron BRAMWELL.

"The plaintiff, a surgeon at Tichfield, in Hampshire, sought to recover a sum of £331 9*s.* 3*d.* from the defendant, a woman who carries on the business of a harness-maker in the same place. The defendant had been suffering for some three or four years from a tumour which pressed upon the urinary canal, for which the plaintiff had attended her, performing operations and supplying physic. The amount of physic which the poor woman seems to have taken is somewhat startling. No feat of any modern 'sensation man' ever surpassed the one performed by her. Ramee Samee, the celebrated Indian juggler, used, it is said, to swallow swords and cannon-balls; and a fit of the hiccoughs, when he had introduced a sword into his stomach, proved fatal to him: the defendant swallowed 2677 draughts and mixtures and 111 boxes of pills, rubbed-in the contents of 23 boxes of ointment, and had 778 visits paid to her by the plaintiff; and yet lived to be sued for £331 9*s.* 3*d.* after it was all over, and probably now she wishes she hadn't.

"The plaintiff stated that, having taken into consideration the state of the defendant's circumstances, he had greatly reduced his usual charges for both attendance and physic; and a medical witness was called to show that the plaintiff's treatment of the defendant's case had been proper. During the time of the plaintiff's attendance, the defendant had paid him, in goods and money, £96 15*s.* 1*d.*

"After the counsel on both sides had addressed the jury on behalf of their respective clients,

"His Lordship summed up, telling the jury that if they believed the plaintiff's statement,—one supported by entries made in his books, and which were produced before them,—then he was entitled to recover; but it was quite competent for them to say what sum they thought he ought to receive. The learned Judge, having calculated that the defendant had been taking two draughts every day for years, said that he should have thought it would have been cheaper for her to have had her physic in the wood instead of by the bottle.

"Eventually the jury found a verdict for the plaintiff for £105."

There is much to be regretted, and, if possible, avoided in occurrences of this nature. Without for a moment questioning the value of the services rendered, or adopting the verdict of the jury which found as due less than one-third the amount claimed, we cannot help thinking that such an *exposé* might have been avoided, had the practitioner and patient acted more explicitly towards each other. The natural result of very prolonged attendances without periodical remuneration, is to depreciate in the judgment of the recipient the separate value of each visit, and to lead the professional services to be regarded as a matter for ultimate optional assessment rather than ascertained payment. Under such feeling, dissatisfaction invariably follows on one side and disappointment on the other when from any cause a peremptory demand for a settlement is made. However unavoidable, it is by no means desirable that a court of law should be the termination of long-continued and intimate professional relations, or that the complaints of the plaintiff and recrimination of the defendant should afford the public amusement, while legal expenses tend to attach to the verdict on either side a largely diminished pecuniary value. By the exercise of a sound discretion such cases could very rarely arise. We know that the subject of arrangement for professional payment is one of delicacy and difficulty, to be determined by the right feeling and sound judgment of each practitioner. With such knowledge we can only impress on our brethren the necessity, while evincing under every circumstance a generous consideration for afflictions which render perpetual attendance peremptory, at the same time of having such a prudent regard for their own interests that they at least cannot, as in the case we have quoted, be ultimately denied even an approximate amount of their required remuneration.

To the casual observer nothing appears more inexplicable than the absence in the medical profession of a provident regard for the future. There is no class of men who from their calling are more exposed to disease than the members of the medical profession. It would seem as if their continual experience of the calamities of others exercises no beneficial influence upon themselves. Every man amongst us must have witnessed numerous cases in which the father of a family has been stricken down in the prime of life from some unforeseen and totally unexpected cause: he has observed and sympathized with those who have depended upon the head of the family for their daily bread. The case of his patient of to-day may be his own to-morrow. How are we to explain his apparent apathy under such circumstances? We confess that we are totally unable to understand it. That his time is fully occupied in his mission of mercy and usefulness—that his energies are strained to the utmost to relieve the sufferings and the necessities of others, will not be denied; but that these duties should act injuriously to himself and his own family does, indeed, seem remarkable. That the results of his self-abnegation are disastrous cannot be controverted. The poverty of the great mass of the profession speaks "trumpet-tongued" in the long and melancholy lists of applicants for relief to our Benevolent Funds and Benevolent Colleges. Any means which can be devised for the prevention of so much unmerited suffering is entitled to the most serious consideration and our unequivocal support. How is it that we have not Health Assurance Offices, or, in other words, benefit clubs, for medical practitioners? Our "Funds" and "Colleges," admirable as they may be, are totally inadequate to the most important purposes for which Health Assurance Clubs should be established. Some of them at best afford but temporary relief, whilst others impose upon the candidates for succour an amount of canvassing and exposure which to many is totally

overwhelming. We therefore hail with satisfaction the proposition of our esteemed correspondent, Dr. BRYAN (see p. 281), for establishing a Health Assurance Society. Such an institution offers inestimable advantages to the profession. By the payment of a small sum periodically, the members of such an association will be entitled to the receipt of something like an adequate provision in the time of their direst necessity. It would be a claim to which they would be legally entitled, not an appeal to benevolence or generosity. Self-respect would not be sacrificed; exposure would be avoided. In the interest of a great number of the medical practitioners of this kingdom, we therefore give our cordial approval and support to the establishment of Medical Health Assurance Societies.

Medical Annotations.

"Ne quid nimis."

KING'S COLLEGE AND ITS PUPILS.

THE Council of King's College have advanced another step on a road which can only end in the entire alienation of the large body of students who have received their medical education at that institution. By their recent appointment of a comparative stranger over the heads of two of their staff, old pupils of the College, and distinguished in that branch of medical science which was the subject of the professorship, they virtually acknowledge their inability to educate men in a manner to qualify them for the position of teachers in the medical schools. Henceforth (if they are correct) the path to distinction is blocked up at the College gates; and those who, with such a prospect before them, are yet willing to enter, must be prepared, as was said of another place, to "leave hope behind." For some time past, from some inscrutable motives of policy or interest, the Council have shown their determination to resist the election of old pupils to the principal posts in the hospital. A number of "assistant" appointments have been created, to be held for a short term only, with no claim for promotion; and these, it is true, have been filled by their own men, probably because no others would be found willing to accept them. But the rigid exclusion of their own *alumni* from the higher offices has been sufficient to induce a belief that the fact of having received his education at King's College is the most fatal objection which can be brought against a candidate for a professorship in that institution. The injustice committed is manifest on considering the number of distinguished men whom this policy has dispersed, to seek in other schools the appreciation of merit which is denied to them in their own.

The very name *alma mater* is associated with an idea of kindly interest. She is supposed to watch silently, but with no small sympathy, the struggles of her family in the hard contest of professional life. She is often likened, indeed, to a hen whose wings are ready to receive her young, and whose beak is active to protect them. But this idea will soon cease to be presented to the imagination of a King's College man. On the contrary, he will see in his *alma mater* but the type of an obstinate shabby bird, who fouls her nest and drives away with her beak any confiding young which seek to nestle under her wing.

We have not a word to say against the acquirements of the gentleman who has been fortunate enough to obtain the vote of the Council. They have, doubtless, reason to believe that he is qualified for the position. But the Council must possess a far deeper insight into the future than we should be willing to accord them to justify their appointment of an untried candidate over the heads of men who, during the course of their student life, and for years afterwards in the out-patient department, have evinced their possession of all the qualities necessary to fit them for the post.

We have reason to believe that a very widespread feeling of dissatisfaction has been created by these proceedings, which are justly felt to be opposed to long-established usage, and certain, if persisted in, to be subversive of the most powerful incentive to exertion—the prospect of promotion by merit. Drs. Tanner and Meadows are following the example of Henry Lee, Hulke, Murchison, Heath, Lawson, and other men of note, who have turned their backs upon the ungrateful institution in which they had been nurtured.

THE RESPONSIBILITY OF MEDICAL PRACTITIONERS FOR THE ACTS OF THEIR ASSISTANTS.

THIS interesting legal point was involved in the case of Gilhespie *v.* Fenwick and Peart of North Shields, which has just been closed by mutual arrangement. Our readers may remember the outline of the facts. A Mrs. Gilhespie was prescribed for in October last by Dr. Fenwick. Strychnia was not part of the prescription, but the patient soon died after taking the medicine, and the suddenness of her death, the discovery of strychnia in the body and the medicine, and the too close proximity of the solutions of strychnia and of antimony in Dr. Fenwick's surgery, made it quite clear that the patient had died from strychnia, and that this poison had been put into her medicine by an unfortunate mistake of the dispenser.

Dr. Fenwick, doubtless acting under advice, declined to contest the question of his liability. This point being conceded, the only question remaining to be settled was the amount of damages to be paid; and this was to have been determined at the late assizes by the sheriff and a jury of the county of Northumberland. As soon, however, as these were duly assembled and sworn, they were informed that an amicable agreement had been come to, by which the defendant had consented to pay the plaintiff £500, exclusive of costs, which must have been something considerable—probably hundreds more.

As we have said, the question of liability was not tried; but that medical men are liable for the acts of their dispensers may be regarded as a settled point, both from the fact of the liability not being questioned in this case, in which there has been no want of disposition to resist palpable conclusions and to start questions, and from the distinct statements of counsel on both sides that on this point of law, the responsibility of medical principals for the doings of their servants, there could be no possible doubt.

Be it known, then, to all medical men who do the work of apothecaries that a mistake of their dispenser, causing the death of a person sustaining the relation of wife and mother, may cost them five hundred or a thousand pounds, to say nothing of the personal pain and professional injury involved in such an unfortunate accident.

This is a very serious liability, and in the case of many men would simply mean their ruin. It is unreasonable to think that the medical practitioner, whose anxious mind is too fully occupied with the higher questions of treatment, can have much leisure to superintend the acts of his dispenser. One great effect on the profession which a few such cases as this would have, would be to throw doubt upon the wisdom of the common arrangement in accordance with which the general practitioner does the double work of physician and apothecary. If benefit accrues to any from the practitioner dispensing his own medicine, it certainly does to the poor of the country, who are largely, and in emergencies promptly, supplied with both advice and medicines, without present and with little prospect of future payment. There is, after all, something philanthropic in the very nature of our profession. "Having the poor always with us," and having, in some sort exclusively, the power of relieving them, it is inevitable that we should often feel im-

pelled to relieve them apart from all commercial considerations. But if for an error of our dispensers—and, with all appreciation of the terrible seriousness of such an error, to err is human—we are to be mulcted to the figure of £500 or £1000, we shall have to consider whether we can afford to do the work of dispensing, and whether it would not be wiser, in accordance with the principle of division of labour and responsibility, to confine ourselves strictly to the intellectual work of the profession. As we have said, the poor will be among the chief sufferers by such a change in the present arrangement. On occasions of urgency, they will have to go to two persons instead of one, and they will need ready money to pay for medicine, as they require it to pay for meat, or other unurgent commodities. It needs little acquaintance with the poor to understand that this must often lead to prolonged suffering, and occasionally to fatal results, which, by an earlier application for relief, might have been averted. But it is not the poor alone who would suffer by an altered arrangement: the rich also benefit by the present system. Their medical adviser does give a look—limited, indeed, but most important—to the character of their drugs, and to the way in which they are dispensed; and to this fact must be attributed the exceeding rarity of such accidents as the one above mentioned. More than this: is there no advantage in the privacy of the present arrangement? Medicines often disclose the infirmities, and sometimes the sins, of those who have to take them; things all too delicate to be known to any but the medical attendant, in whose keeping they are sacred and safe.

Whatever the advantages of the present plan, we venture to predict that if this doctrine of frightful liability is not very fairly and considerately applied, the profession will suffer extreme hardship, and the public extreme inconvenience; and that for one life lost by the existing arrangement, with all its faults, two will be lost by its alteration.

If, then, the great object of law be to protect life, let those who administer it consider well all the bearings of such a principle as that under discussion. Let them consider that errors of dispensing are among the rarest of accidents; that medical men do more for their patients by exercising their brains as to the medicines to be prescribed than by superintending the dispensing of them; and that more life will be lost by their ceasing to dispense than by their continuing to do so. We have faith that the public will appreciate these facts, and that few medical practitioners will suffer so severely as Dr. Fenwick has done. Let us do all we can in the way of additional care and precaution against such accidents, and let the public and the juries which represent it remember to apply legal principles with fairness and consideration. It is easy to be hard and revengeful in the application of even a reasonable principle—to extinguish the love of profession and practice in the breast of the best practitioners, and so to do an amount of evil out of all proportion great in comparison with the evil we seek to counteract. It is the interest of the practitioner to have all the work of practice, even dispensing, done well; and this interest of the practitioner is the best security the public can have. On the other hand, it is the interest of the public to protect its medical advisers. It has few better friends, and it cannot do a more unkind or unwise thing than sanction a spirit of severity in the judgment of errors which are amazingly rare.

MR. PROPERT AND MR. ADAMS.

WE regret not to have received any further direct explanation from Mr. Propert of his connexion with the Russells, who recently brought so abominable a charge against Mr. William Adams. The present aspect of matters is so very perplexing and so little satisfactory, that Mr. Propert, if he values the good name which he has earned among his brethren by so many years of arduous and public-spirited labour, cannot suffer it to remain thus clouded and doubtful. From the correspondence which was read at the meeting, and which had been freely spoken of in the profession before it was read there, it was evident that Mr. Propert had at some stages of the case taken a very active interest in the Russells, and strongly favoured the prosecution of Mr. Adams. Then, too, he speaks in December of referring the matter to his solicitor, and in January, of his confidence in his solicitor that he would conduct matters satisfactorily; and it is stated that he expressed to Mr. Toynbee his determination to have the case tried in a court of law, if it cost him a thousand pounds. The solicitor who brought the action happened also to be the gentleman who is known to act, and is, we believe, still acting, as Mr. Propert's private solicitor. This gentleman, however, writes to us this week disclaiming any connexion with Mr. Propert as his principal in this case. When the case came on at Kingston, and was postponed on Mr. Propert's certificate of the indisposition of Mrs. Russell, it is positively stated that Mr. Propert tendered his cheque in payment of the costs of the day. These alleged facts, together with the earlier letters, in which he so emphatically espoused the cause of "Mrs. Russell and her lovely daughter," form a series of circumstances which undoubtedly require of Mr. Propert that he should do something more than emphatically call Heaven to witness that he did not find a penny for the costs of the late trial.

Let Mr. Propert make a clean breast of what he did, and why he did it. If he was to any extent deceived by this wily woman, and entrapped into a blind horror of the supposed crimes of his brother practitioner, let him fairly own that he was so deceived, and frankly apologize for the grievous wrong which he has done to his brother and his profession. At any rate it is so very evident that for some time he did sympathize with and protect the Russells—that he did favour the reference of their claim to a court of law, and decline to enter into any of the details of Mr. Adams's answer to the tale—that he is bound to state what he knew of the Russells, how far he helped them, and what he now thinks of their story. Mr. Propert cannot but be aware that in lending them the sanction of his name and approval, he was arming them with a fearful weapon in the prosecution of their designs upon his fellow-practitioner, and having so largely incurred that responsibility, he cannot shrink from some of its consequences. It is human to err; but repentance and apology must precede pardon.

THE PRIZES OF THE ACADEMY OF SCIENCES.

THE awards for the Montyon prizes of the French Academy of Sciences have been very interesting this year. M. Cruveilhier receives the first for his researches on the subject of Morbid Anatomy. It is somewhat startling to our English notions to see this eminent and truly illustrious teacher, a patriarch in science, patted on the back and encouraged by a prize of a hundred pounds. We are accustomed to regard such labours as beyond encouragement of money prizes, and it would by no means accord with our notions of dignity or utility annually to run through the literature of science and distribute small sums of money and "encouragements" to the highest illustrations of science. But in Paris the theory of encouragements still holds its place; and half the writers can boast of being "lauréats" or "encouragés," just as every third man of respectability can show a piece of ribbon in his button-hole. The illustrious co-partners of Cruveilhier in this encouragement are—Lebert, for Morbid Histological labours; and Frerichs, for his excellent treatise on Diseases of the Liver, recently published by the New Sydenham Society, as rendered into English by Dr. Murchison. M. Larcher receives £60 for his memoir on the Natural Hypertrophy of the Heart during Pregnancy. M. Larcher states that this hypertrophy occurs in the left ventricle solely, and is coincident with the enlargement of the uterus. This statement appears to be admitted by the Academy, having been confirmed by the observations of other French physicians.

We are not aware whether this subject has occupied the attention of any English phyriologist. The report of the Academy, after announcing the award of other prizes, proceeds to notice a paper of M. Bourgeois, of Etampes, and one of M. Raimbert, on Carbuncular Affections, including Malignant or Carbuncular Œdema. There is some tendency to similar epidemic conditions in this country, and they deserve to be carefully watched and recorded.

REGISTRATION IN IRELAND.

IRELAND may be congratulated on the rapid progress of an excellent registration measure through the House. In spite of more or less opposition, arising partly out of the desire to include a registration of marriages in the measure, the Bill may now be regarded as practically safe. The medical officers of dispensaries will have a preference for the office of registrar: this is at once a professional advantage and a public gain. The chances of registering doubtful deaths will be much lessened when the registrar is a medical officer; and the number of uncertified deaths slipped into the register, on various pretences, will be greatly diminished. The records of mortality furnish the primary and most essential data for ascertaining the sanitary condition of a people. Without such a guide it is impossible to know where, how, and by what means, preventable mortality should be attacked. The history of the great sanitary movement which our profession has led, and for which this country is so deeply indebted to medical men, shows that the first necessity, in beginning that good work, is a satisfactory registration of the causes of death. Thus the enactment of this measure of registration may be regarded as, in some sort, a commencement of the sanitary regeneration of Ireland.

DR. SEMPLE.

WE understand that the amount placed in the hands of Dr. Waller Lewis and Dr. Forbes Winslow, joint treasurers of the Semple Fund, exceeds £500.

As the subscription list is now closed, the treasurers take this public opportunity of tendering their acknowledgment to those members of the medical profession and others who so promptly and kindly responded to the appeal made to them.

It will be satisfactory to Dr. Semple's friends to know, that the object which the treasurers had in view has been fully attained.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

PROFESSOR HUXLEY'S LECTURES.

LECTURE IV.

PROFESSOR HUXLEY commenced his fourth lecture by stating that the task he intended to undertake in this was a much more difficult one than that he had accomplished in the previous lectures, as many gaps yet exist in our knowledge of annulose animals. He then proceeded to describe

Echinodermata.—This group includes the Holothuriæ, Trepangs, Echinidæ, Asteridæ, Cornatulæ, Ophiuridæ, Crinoidea, and others first regarded as typical Radiata. But though they differ enormously in external form, their internal structure groups them altogether. All have their young undergoing metamorphoses, which are exceedingly peculiar; and these larvæ are so different from the adults, that they have for a long time been thought separate animals. Professor Huxley took Bipinnaria as an example. Its name originated in the error just mentioned. It is the larva of a starfish. This gives rise to eggs, which produce a ciliated embryo. The cilia soon become restricted to two circular bands. A mouth, gullet, stomach, and intestine are developed; and what is important, this larva is *bilaterally symmetrical*: its anterior part develops very long processes (hence its name), and it swims about thus. These larvæ may vary in different Echinodermata, but are always bilaterally symmetrical. Those of Echinidæ delevop a siliceous skeleton, and have a pyramidal form. The like occurs in Ophiuridæ. In Holothuriæ the larva resembles that of starfishes. Now, a small part of the integument is thrust inwards, as it were, on the body of Bipinnaria; and at the same time a small mass of formative tissue is developed near the stomach. The tube formed by involution of the integument extends and describes a circle round the stomach, giving off five radiating canals. The little formative mass also grows, and gradually surrounds this organ, forming five lobes. So that the Bipinnaria swims about with what seems a small starfish stuck asymmetrically on its body. Its gullet is soon cut off, sometimes also the rectum, and the Bipinnaria dies; while the young starfish carries away its stomach. The circular and radiating canals form the basis of what is called the *ambulacral system* in Echinodermata, forming also locomotive organs. A nervous system may occur in the provisional larva; but certainly exists in the true larva.

Scolecida.—A very difficult group to define, containing Rotifera, Turbellaria, Trematoda, Teniadæ, Nematoidea, Acanthocephala, and Gordiacea: all soft animals, differing much in form and habits; many are parasites (entozoa). The first four divisions may have a water-vascular system, composed of vessels, first straight and contractile, then ramified and ciliated, filled with water, and communicating externally through a pore. These four groups have a nervous system, composed of one or two ganglia. They have no true heart, and differ very widely in their reproductive organs and metamorphoses. Nematoidea have a comparatively simple structure, and an elongated body. Their nervous system is very doubtfully made out. Professor Huxley and Von Siebold discovered a curious system of contractile vessels in these animals, which seem to be homologous with the water-vascular system. The Acanthocephala are very anomalous worms, with a phial-shaped body. Their head is provided with recurved hooks. A ganglion constitutes their nervous system. They have a system of superficial vessels, which may correspond with the water-vascular system. They are parasitic. Of the anatomy of Gordiacea, little or nothing is known. Their larvæ, which are parasitical in insects, come out and acquire their reproductive organs, inhabiting water or damp earth, where they propagate.

Annulata or *Annelida.*—Earthworms, leeches, and seamice belong to this group, with many others. Annelida have well marked characters. Their nervous system consists in an elongated chain of ganglia. The body is always divided into rings, more or less distinct, to each of which a pair of ganglia correspond in the higher forms. The gullet always passes before the principal ganglionic mass. Locomotive appendages may exist; but are never distinctly jointed. They have no true heart; the fluid corresponding to blood is contained in the space between the intestine and the walls of the body. Contractile vessels, closed at their distal extremities, traverse the body; they are filled with a red or green fluid, and constitute the pseudo-hæmal system characteristic of Annelida. None of these have true mandibules.

Crustacea.—The lecturer, speaking of these animals, said that, like Annelida, they had the nervous system composed of a chain of ganglia, and the gullet divided in the same way the cerebral or principal ganglionic mass from the rest. Their body, which is covered by an exoskeleton, hardened by "chitine," is divided into distinct rings or somites. Crustacea, to which lobsters, crabs, the extinct Trilobites, and many other forms belong, have all distinctly-articulated appendages (this is only uncertain in Trilobites). They all breathe through branchi, except the lowest forms, which have cutaneous respiration. They have no pseudo-hæmal system. All have a distinct heart except the Ostracoda and Cirripedia. The locomotive limbs exceed four pairs, and if fewer, the antennæ are modified for the purpose. It is difficult to diagnosticate distinctly the lower Crustaceans from the lower Arachnida.

Arachnida have a chain of ganglia, distinctly-articulated limbs, and the body divided into somites, more or less distinct. Their mode of respiration is various. Scorpions breathe through pulmonic sacs; spiders through pulmonic sacs and tracheæ; mites through tracheæ alone, and the lower forms have cutaneous respiration. None possess more than four pairs of locomotive organs; the antennæ are never so modified.

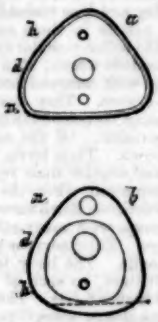
Myriapoda possess trenchant characters, all having a well marked chain of ganglia, and a well developed heart. All respire through tracheæ (membranous tubes thickened by a chi-

tinous layer continuous with the walls of the exoskeleton, and spirally disposed inside, keeping them constantly open; they ramify to the most extraordinary extent all over the body). The limbs of Myriapoda are very numerous, and the antennæ are never locomotive organs. Centipedes and millepedes belong to this group.

Insecta constitute a group more numerous than all the others of the animal kingdom put together, and varying as much as all these groups; but possessing well marked general characters of its own. All have a chain of ganglia, and the cerebral mass separated from the rest by the gullet. Their body is never composed of more than twenty somites; they have never more than three pairs of legs, and many have one or two pairs of dorsal appendages (wings). A well developed heart and system of vessels, containing corpusculated blood, always exist. They respire through tracheæ, and their young undergo well marked metamorphoses.

LECTURE V.

The lecturer stated that as yet he had taken class by class without entering into the characters of the greater groups, but that, in speaking of Vertebrata, as he purposed doing, it would be useless to consider the greater groups afterwards, as he intended doing for Invertebrata, there being in the former a much greater uniformity of structure. If a transverse section were made of any typical invertebrate, it might be represented by a single tube (*a*), composed of the two cutaneous layers, with the digestive canal in the centre, the heart above it, and the nervous system under it. If a similar section were made of any vertebrate animal, the parietes of the body would be found to constitute a double tube (*b*), an upper and smaller



one enclosing the nervous system, an inferior and larger one enclosing the digestive canal, and under it the heart. Between Invertebrata and Vertebrata no intermediate forms exist in living and, as far as our knowledge goes, in fossil animals. Their development is also very different. The blastoderm of Invertebrata extends nearly all over the yelk, and the digestive canal and nervous system are formed by a differentiation of parts within. In vertebrata, the blastoderm rises up in two folds (dorsal laminæ); these grow and unite in the middle line, forming thus the second and upper tube characteristic of vertebrate animals, and in which the nervous system is developed; and, curiously enough, this (the spinal cord and brain) is, as Remak has shown, developed as a thickening of the internal lining of this tube, which is identical with what becomes epidermis on the surface of the body. In the inferior tube, the digestive canal, the heart, and another nervous system are developed; this last is the homologue of the nervous system of Invertebrata, which thus have no structure homologous to the spinal cord and brain of Vertebrata. Under the groove on the blastoderm of these a row of cells of a peculiar nature is formed, constituting the partition between the two tubes (chorda dorsalis or notochord). Again, Invertebrata have the gullet dividing the principal ganglionic mass from the rest; in Vertebrata, the digestive canal literally turns away from the principal nervous mass, and opens opposite it. Every vertebrate embryo, when raised from the blastoderm, develops on the sides of the neck five (typical) arches; and clefts are formed between these, which are the visceral arches and the visceral clefts. The locomotive appendages are never more than four, articulated internally, as their skeleton is axial; and they are supported by definite arches of the internal skeleton (pectoral and pelvic arches); moreover, the jaws are never modifications of the anterior limbs, but parts of the internal skeleton. All vertebrata have venal, arterial, and capillary vascular systems, containing corpusculated blood, red, except in Amphioxus, which has also no true heart, which all the rest possess; all have an hepatic portal circulation. Such are the diagnostical characters of Vertebrata. Professor Huxley then stated that he should now proceed to describe the different groups, purposing to give the accurate characters common to all the members of each separate group, without going into exceptions.

Fishes (*Pisces*) have the fœtus devoid of those structures called amnion and allantois; all have a temporary yelk bag, and in them the visceral clefts and arches are numerous, the hinder ones remaining persistent, the visceral arches becoming branchial arches, supporting extremely vascular tufts or filaments (branchi), through which respiration is effected. The existence of median fin rays (bones supporting the dorsal, anal, and caudal fins) is a marked character of all fishes, the Lepidosiren included. The inferior extremities of the pectoral arch never abut against a sternum. The pectoral limbs always have fin rays round their margins; but this character may not be exclusive, for the extinct Ichthyosauria seem to have had something similar. The blood corpuscles of fish are nucleated. It has been stated that in fishes no communication exists between the mouth and the nostrils, but this is incorrect.

Amphibia also have no amnion and no allantois; in many the branchi are persistent, but they exist in all at some period; some acquire lungs. No amphibian has median fin rays, and the limbs, where they exist, have definite, well-marked regions; in the anterior limb, a humerus, a radius, an ulna, a cartilaginous carpal mass and digits may always be readily distinguished. The skull is articulated to the first vertebra by two condyles; the basi occipital bone always remains cartilaginous. In all fishes and Amphibia, the hyoidean apparatus and the quadrate bone are connected with the skull by a common pedicle. All Amphibia have a heart with two auricles and one ventricle. As is easily seen, no great difference exists between them and fishes. We now come to a greater gap.

Reptiles (*Reptilia*).—These animals possess both an amnion and an allantois in the fœtal state. At a certain period the embryos of this and the following groups of Vertebrata could not be distinguished one from another. The amnion is a shut sac, filled with fluid, enveloping all or a part of the embryo, on the under surface of the body of which a bud is formed; this grows and becomes a hollow bag richly supplied with vessels, and is the allantois; in reptiles it envelops all the embryo, and serves as its respiratory organ, the air passing through the pores in the eggshell. In reptiles the visceral arches never develop branchi. The skull articulates with the vertebral column through a single condyle. The quadrate bone connecting the skull and the lower jaw has no common pedicle with the hyoidean apparatus. The body is covered with horny scales, and the fore limbs never assume the form of ornithic wings.

Birds (*Aves*) are nothing but excessively modified reptiles. They have an amnion and allantois, which is respiratory; no branchi; their lungs are well developed, and the bronchi continued into air sacs. They have one occipital condyle, and a quadrate bone connecting the lower jaw, which is composed of several pieces, as that of reptiles, with the skull. The body is always covered with feathers, horny epidermic appendages developed from a pulp in an involution of the integument; the surface of this pulp is grooved, forming the mould for the feather, the vane of which is at first enclosed in a horny cone, which cone, when elongated and entire, constitutes a hair. The fore limb is modified for flight; three metacarpal bones are fused together, and never more than three digits are developed. The hind limb is also modified; and three metatarsal bones are fused into one—the tarso metatarsal bone.

Mammalia.—A gap exists between birds and mammals, in which the allantois is deciduous or placentiferous. In marsupials at a very early period it is lost; but in all the rest, the fœtus, which is not enclosed in a definite egg, but in the uterus of the mother, gives off a very vascular allantois, produced into villi or processes. During gestation, the uterus has its internal surface grooved and uneven; into these depressions the villi of the allantois dip, and they interlock thus together; the capillary loops at the extremities of the villi communicate with the sinuses of the uterus, and thus through endosmosis and exosmosis an interchange of blood takes place between the parent and the fœtus. This is the placenta, and it serves both as a respiratory and a nutritive organ.

LECTURE VI.

Professor Huxley said, that in his last lecture he gave diagnostic definitions of the Vertebrata, and the groups into which they are divided; but not having terminated defining the characters of Mammalia, he would proceed to do so.

Mammalia are distinguished not only by their embryological characters, but by many other important ones. They never have branchial processes, and their bronchi never terminate in air sacs. In mammals, the lower jaw is connected directly with the skull by the squamosal element, and not by a quadrate bone. The two rami of the lower jaw consist each of a single piece. The quadrate and the articulare (of the lower jaw of other Vertebrata) are converted into the inchus and the malleus, subserving the function of audition. Mammals have two occipital condyles, as in Amphibia, but the basi-occipital is well developed and ossified. All have mammary glands, and develop hair, to a greater or less degree, and more or less modified, on their external integument. These are the characters which distinguish mammals from other Vertebrata.

The lecturer then said that he should now proceed to discuss how the groups of the animal kingdom are to be classed together, his great object being to follow the same course as had already been pursued with the smaller groups, rejecting all that cannot be exactly defined.

Taking the Vertebrata into consideration, the reptiles, birds, and mammals are found to be all devoid of branchi, and possessing an amnion and an allantois, dividing them distinctly from fishes and Amphibia, which possess branchi and never develop an amnion or allantois (the urinary bladder of Batrachia has been thought a rudimentary allantois); at all events the amnion has never been found in these two groups, and there is a broad gap between Amphibia and Reptilia. Again, mammals differ more from reptiles and birds, than these one from another. So that two or three greater divisions may be formed, including the five classes of *Vertebrata*. In the next place, there will be no difficulty in admitting that Insecta, Myriapoda, Arachnida, and Crustacea resemble each other. All have definitely segmented bodies and jointed limbs; all have a nervous system, composed of a chain of numerous ganglia united by commissures; the gullet divides the principal mass from the rest; most have a distinct valvular heart (Cirripedia, Ostracoda, and many Acari excepted). Another character holds good for many, at least for all the higher forms, in which the head is composed of six somites, whose appendages are modified into organs of sense, and mandibules. These four groups united constitute the *Articulata* or *Arthropoda*. The Annulata differ widely from these in many respects, but agree with them in their annulated bodies, and in the nervous system, which is composed of a chain of ganglia; the alimentary canal also divides the principal mass from the rest; but they have no articulated appendages, and all possess a pseudo-hæmal system and no true heart; the young often are ciliated. United with Arthropoda, they constitute the great division of *Annulosa*. Echinodermata and Scolecida present more difficulties: the last have a superficial resemblance to Annelida; but the nervous system in them consists of one or more ganglia near the mouth. The main point, however, is to know what is the exact relation between Echinodermata and Scolecida: it is disguised in the adults. In Echinodermata, the larva is a free-swimming ciliated being, bilaterally symmetrical; while the adult is developed by budding in this larva, and is radially symmetrical. Now J. Müller discovered a remarkable animal, which he named Pilidium gyrans: it had a ciliated helmet-shaped body, with a mouth and intestine. Of late it has been discovered that a mass of formative tissue is developed near the stomach of this curious being, and gradually wraps round this and the intestine, which it appropriates. It has an elongated form. The Pilidium gyrans dies, and a long turbellarian worm (Nemertes) is the result of this budding. This is a most striking fact, and the similarity of development with Echinodermata is truly wonderful. Again, the same similarity, though in a much lesser degree, exists in the development of Tænia. It gives rise to a small larva with three pairs of hooks, bilaterally symmetrical; if any of these are swallowed by a pig (for instance), they bore into the walls of the intestine, and, being excessively minute, they are carried into the circulation by the portal vein; they soon find a resting place, become globular, lose their hooks, and an internal budding takes place, the bud being radially symmetrical, with a small head surrounded by a circlet of hooks, and a vesicle. It is now known as a cysticercus, which, if swallowed by a man, loses its vesicle, and soon develops into a tænia. This mode of reproduction is not universal in Scolecida. It is in these and Echinodermata alone that the curious water-vascular system is found. These groups united form the *Annuloida*. Cephalopoda, Pteropoda, Pulmogasteropoda, and Branchiogasteropoda have many characters in common. All have a nervous system consisting of three pairs of ganglia—the cephalic, the pedal, and the parieto splanchnic pairs; all possess that singular toothed tongue, the odontophore. Thus characterized, these higher molluska are grouped together as *Odontophora*. Lamellibranchiata are to Odontophora as Annulosa to Arthropoda. They have the same three pairs of ganglia

and other characters in common, but no odontophore, and a very different mouth. Together with the Odontophora, they form the large division of *Mollusca*. Brachiopoda, Ascidioida, and Polyzoa follow: they all (except Appendicularia) have a mouth surrounded by elongated ciliated tentacles; the nervous system is simple and much reduced; a pedal ganglion may exist. The largely-developed atrial system is yet to be found in Polyzoa, in which there may be something representing it. These three groups form the *Molluscoida*, which stand to Molluscs as Annuloida do to Annulosa. Actinozoa and Hydrozoa form together one of the best defined groups of the animal kingdom. They all have the digestive cavity open distally, and communicating with the perivisceral cavity (*a*, *b*): this occurs in no other animals. The mouth is surrounded by tentacles, or else these are developed on some part or other of the body: this feature is quite diagnostic of the two groups. The presence of thread cells is another character: these consist of a microscopical bag (*c*, *d*), part of which is turned into a tube and thrust inwards (*d*); spines are developed on it, and

it is continued into a long, minutely serrated thread, spirally coiled (*d*). The pressure of the thread within is so great on the elastic walls of the cell, that on the least external pressure the balance is overcome, the capsule everted (*c*), and the filament thrown out. In contact with the skin it produces great irritation; how, is a matter of dispute. (Some molluska and Scolecida possess organs similar to thread cells.) A nervous system has only been found in Beroë, consisting in a ganglion opposite the mouth. In all, the body is composed of ectoderm and endoderm. Frey and Leuckart first proposed the division of *Calenterata*, formed by Actinozoa and Hydrozoa.

The last great division presents great difficulties, and remarks referring to it may be liable to great modifications. Infusoria are distinguished by their numerous cilia, their gullet terminating in a soft sarcodic substance, into which the food tumbles; their contractile vesicle, curious reproductive organs, and mode of encystation. They resemble in some respects Scolecida, and loosely Gregarinæ. Professor Huxley stated that he should leave this group open. Spongiadæ have a certain resemblance to Rhizopoda. Speaking of Rhizopoda, the lecturer said, that in a previous lecture he had left the group open, as the definitions on which it stands are not very tenable. This group presents three types: to the first type Foraminifera belong; their body is a mass of structureless jelly, sending out long prehensile processes. The second type is represented by Amœba, a mass of jelly sending out short processes, having a clear contractile vesicle. The third, or Thalassicolidan type, exhibits other peculiarities: their body is a mass of structureless jelly, sending out long processes, and enclosing a large vesicle filled with sarcode, containing a number of cells, coloured particles, and well-formed crystals. Professor Huxley said that *Protozoa* was a very convenient term, including all the lowest forms of animal life. He then stated that in the accompanying

table he had compared the classification given in these lectures with Cuvier's (the most in use). In the time of that great naturalist the lower animals were very little known, and included by him in his Radiata. However, as Cuvier broke up the heterogeneous *Vermes* of Linnæus, modern naturalists have broken up his Radiata.

KINGDOM ANIMALIA.

- Protozoa . . . { *Gregarinidæ*; *Rhizopoda* ?; *Spongiadæ*; *Infusoria*
- Cœlenterata . { *Hydrozoa*; *Actinozoa*
- Molluscoida . { *Polyzoa*; Ascidioida; Brachiopoda
- Mollusca . . . { Lamellibranchiata; Odontophora { Branchiogasteropoda; Pulmogasteropoda; Pteropoda; Cephalopoda
- Annuloida . . { *Echinodermata*; *Rotifera*; *Scolecida* ?
- Articulata or Annulosa { Annulata; Arthropoda . { Crustacea; Arachnida; Myriapoda; Insecta
- Vertebrata . . { Branchiata . . { Pisces; Amphibia; Abranchiata . { Reptilia; Aves; Mammalia

(The names in italics belonged to Cuvier's Radiata.)

ERRATUM.—In the third Lecture, article "Polyzoa," *for* "endoskeleton" *read* "exoskeleton."

Correspondence.

"Audi alteram partem."

THE RECENT APPOINTMENT OF CERTIFYING SURGEON AT OLDHAM.

To the Editor of THE LANCET.

SIR,—You were pleased, in a recent number of your journal, to insert a few severe but merited strictures on the appointment of a non-resident and recently qualified gentleman as certifying surgeon at Oldham. As I have reason to believe that the subsequent proceedings of the medical practitioners here have been watched with considerable interest and anxiety by our brethren in other towns where similar appointments are in the gift of the inspectors of factories, I ask your indulgence whilst I give your readers—either as a guide or a warning—the concluding chapter of this disgraceful episode.

At a numerously attended meeting of the members of the medical profession resident in this town and neighbourhood, it was unanimously resolved that a deputation should wait upon the Home Secretary, for the purpose of laying before him the whole circumstances of the case, and of urging him, on the grounds of equity, to revoke the appointment. A memorial to the Town Council of Oldham was also signed by every medical practitioner in this borough—except the gentleman who holds the corresponding appointment to the one in question—bringing the matter prominently before them. This appeal, to the honour of the Council be it told, was most heartily responded to. Not only was our memorial favourably received, but, by every gentleman who spoke, the appointment was severely animadverted upon; and the Council unanimously adopted, on public grounds, the following memorial, and resolved that J. M. Cobbett, Esq., and J. T. Hibbert, Esq., the members of Parliament for the borough, should be requested to present it.

"*To the Right Hon. Sir George Grey, Bart., her Majesty's Secretary of State for the Home Department.*

"The Memorial of the Mayor, Aldermen, and Burgesses of the Borough of Oldham, in the County Palatine of Lancaster, in Council assembled, under the common seal,—

"Showeth,—That this council views with much dissatisfaction and regret the recent appointment made by Alexander Redgrave, Esq., of Mr. Robert William Coles, jun., to the office of certifying surgeon to the factories, lately held by Mr. Earnshaw; inasmuch as there are numerous resident practitioners in the borough, of standing and experience, eminently qualified to serve the office.

"That it is manifestly unjust to the whole profession resident and practising in the borough that their claims and qualifications should be overlooked in favour of a young gentleman entirely unknown to the public, non-resident, and only recently qualified; and your memorialists humbly pray that you will revoke the appointment of Mr. Coles, and give directions that the same be conferred on some resident medical practitioner."

This memorial was accordingly presented; and a deputation, consisting of Mr. Abraham Leach, Mr. A. Thom Thomson, and Dr. S. H. Armitage, accompanied by the members for Oldham, afterwards had an interview with Sir George Grey at the Home Office. They were courteously received and attentively listened to, but were given to understand that, unless they could advance some legal or moral objection, he (Sir G. Grey) did not think he could interfere with Mr. Redgrave's nomination. The only legal ground the deputation were prepared to urge—and they have authority for thinking it fatal to the appointment—was this: that the Act of Parliament, 7 and 8 Vic., c. 15, provides that the person receiving the appointment shall be *practising* medicine or surgery; and that, as Mr. Coles was only acting as an assistant to another surgeon in a neighbouring town, he could not be considered to be *practising* within the meaning of the Act. This point Sir G. Grey reserved for consideration, and promised an early decision. That decision has now reached us, and, as we anticipated, is unfavourable. Avoiding altogether the question of justice or equity, he merely, through his secretary, states that, having referred the complaint of the appointment of Mr. Coles, jun., to Mr. Redgrave, the inspector, and having received his reply, he (Sir G. Grey) does not think there are any grounds which would justify him in revoking the appointment which the inspector was authorized by law to make, and which could only be properly revoked by him on clear evidence of some legal or moral disqualification, of which he considers there does not appear to be any proof in the present case.

So end our efforts—not altogether futile, let me hope—in this the *first* clear case of nepotism in the patronage of these factory appointments. May it not form a precedent! Hitherto we have had reason to boast that the rank weeds of nepotism have found no congenial soil in our profession. More favoured in this respect than our clerical sister, patronage in life and limb has been held too sacred a trust to be lightly exercised, and the relative or friend has had to find his natural level in the hard race for public preferment. So much the more is it our duty jealously to watch for and expose any deviation from the strict path of rectitude where a public trust is in question.

In almost all the manufacturing towns where the position of certifying surgeon is within the reach of the profession, the great bulk of the population necessarily consists of the working classes. In such towns, however high a reputation a medical man may attain, he finds it necessary to build up his practice with such material as exists around him. There are no aristocratic or select practices by which a competency may be realized from a comparatively limited number of patients; but, as a rule, the work is heavy, and the remuneration light. Physical and mental toil soon tell their story.* "The snow appears early on the mountains;" and the appointments connected with the factories—the only appointments of value in these districts, and arising, as it were, of necessity out of the very evils from which we suffer—are looked forward to as a haven after the heat and burden of the day.

* In the town of Oldham the mortality amongst medical men has been perfectly appalling. Three only of those practising eleven years ago are now alive. During that period, twelve have died; nine of these died before attaining the age of forty-six years, and nine either primarily or secondarily of brain disease.

If patronage is to be exercised as it has been by Mr. Redgrave in the case at Oldham, a serious question must sooner or later arise between our profession and the civil service. Subordinate officers will educate their sons with a certainty of preferment; the workshop and the foundry will give up their youth; some complaisant member of our profession, holding or *expecting* to hold a factory appointment, may be found willing to accept them as pupils without a fee, and a gross professional wrong, maturing for years, may find its consummation so soon as the fortunate neophyte has crossed the portals of the medical profession. It behoves all of us, therefore, to watch narrowly subsequent nominations emanating from the same quarter. The whole tribe of incompetent mediocrities and subservient hangers-on may, in this instance, sing a pæan over our failure; but if any future Redgrave or Coles, trusting to this as a precedent, should contemplate the perpetration of a similar injustice, there shall at least be found on record the indignant protest of an outraged profession. I am, Sir, yours &c.,

Oldham, March, 1863. BETA.

THE RECENT DISCUSSION UPON SYPHILIS AT THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

To the Editor of THE LANCET.

SIR,—At a recent meeting of the Royal Medical and Chirurgical Society a discussion occurred upon a paper by Dr. Marston, which has since attracted some attention.

As I had the honour of presenting that paper to the Society, I much regret that I was unavoidably prevented from attending on the second occasion upon which it was brought under the notice of the meeting. The discussion turned chiefly upon the mercurial and the non-mercurial plans of treatment; but no attempt appears to have been made to distinguish between the different kinds of disease to which these are respectively adapted.

It would scarcely be in accordance with the character of a scientific society, aided by the light of modern investigations, to discuss a remedy for "fever," without an attempt to define what kind of fever was meant; nor is it more in accordance with the advance of science to consider the treatment of "syphilis," without some definition of the kind of syphilis in question.

Dr. Marston in his paper did not allude to the treatment of syphilis. Had he done so, he would, I doubt not, carefully have distinguished between the different forms of that disease; for I have reason to know that these distinctions are as carefully made in military as in civil practice.

In speaking of climate, Dr. Marston has not said that constitutional syphilis is more *common* in localities where the temperature is high; for the reverse is the fact. But he implied that constitutional symptoms were very difficult of cure in those places during the summer and autumn months; and that the enervating effects of a warm and moist atmosphere acted injuriously in such cases.

I am, Sir, yours &c.,

Savile-row, March 2nd, 1863. HENRY LEE, F.R.C.S.

MEDICAL HEALTH ASSURANCE OFFICES.

To the Editor of THE LANCET.

SIR,—Since my recent communication (with the insertion of which you favoured me in your valuable periodical) I have received letters from several gentlemen in different parts of the kingdom, showing that there is a widely-spread interest in the subject of a Health Assurance Society. I have also read a pamphlet from an Assurance Company established in 1855, containing a sick benefit table with scale of ages and payments, allowing £1 weekly in case of sickness or incapacity for the first six months, half benefit to sixty years of age, and one quarter after that time. For example: "For a person of fifty years of age the annual premium would be £4 2s.;" so that I am disposed to think that with an annual premium of £5, or rather more, a society might safely be established; to which end I should be happy to act *pro tempore*, and to receive the names of those gentlemen who might feel disposed to join, with the understanding that rules should be formed, and satisfactory treasurer (or treasurers) and secretaries appointed; and it might then be seen how far it would be supported.

If you would kindly co-operate, and allow the names of correspondents to be inserted in your widely-circulated journal, you would be conferring a great boon on those of the medical profession who are desirous at once to have such an association formed; and the benefits we must all admit to have accrued to us through THE LANCET lead me to hope that you will do so.

I am, Sir, yours faithfully,

JOHN M. BRYAN, M.D., F.R.C.S.,
Hon. Sec. and Treasurer to the South Midland Branch of the British Medical Association.

March, 1863.

RUSSELL *VERSUS* ADAMS.

To the Editor of THE LANCET.

SIR,—Certain statements having appeared in some of the medical journals in reference to the late action of Russell *v.* Adams to the effect that I was professionally engaged and my costs paid by Mr. Propert, I beg to state most unequivocally that my services were engaged by Miss Russell and her mother, with the latter of whom I had become professionally acquainted upwards of eighteen years previously. The action of Russell *v.* Adams was commenced so far back as the 21st November, 1861. It was not, however, until after incessant solicitations by Miss Russell and her mother that I consented, on the 22nd January *in the present year*, to become the attorney for the plaintiff in that action.

I have not directly or indirectly received, nor do I expect to receive, any portion of my costs in such action from Mr. Propert. And I may add, that I had no communication whatever with Mr. Propert with reference to my undertaking the prosecution of the action on behalf of Miss Russell.

I am, Sir, your obedient servant,

Serle-street, Lincoln's-inn, March 4th, 1863. F. C. J. PIKE.

THE MEDICAL PROFESSION AND LIFE ASSURANCE OFFICES.

To the Editor of THE LANCET.

SIR,—Allow me to inform your readers that the London Life Association not only does not pay a fee to a medical referee, but upon his mild request for the promise of one, the secretary, without deigning to reply to his letter, writes to the assurer to inform him that his medical attendant refuses the required information until he is paid for it. It is readily conceivable that such a course as this is very liable to produce a disagreeable *contretemps* with some of our patients, and I think it right therefore to mention the fact.

As most commercial establishments are glad of publicity, I trust the London Life Association will feel obliged to me for this advertisement.

I am, Sir, your obedient servant,

Great Marlborough-street, March, 1863. THOS. BUZZARD, M.D.

*** The proper course to pursue in all cases where a medical practitioner receives an application from a non-paying office is at once to communicate with his patient, informing him of the reason why he declines to give gratuitous information to the office. In this way the medical practitioner is secured against insidious representations by the company, and may be instrumental in suggesting to his friend the propriety of insuring in an office conducted upon safer and more honourable principles. —ED. L.

THE ARMY MEDICAL DEPARTMENT.

To the Editor of THE LANCET.

SIR,—I append for your careful consideration, and more especially for the deliberate reflection of candidates who are thinking of entering the Medical Department of the Army, the following

Twenty Reasons for not entering the Medical Department:—

1. Because the present position of medical officers is invidious, ill defined, and obnoxious.
2. The position is relatively and prospectively inferior to that of medical men in civil life.
3. The duties are mostly non-professional, consisting in useless reports, profuse figures, and vexatious returns.
4. The duties are antagonistic to those of the officer commanding, who ignores his "doctor."
5. The prospects of advancement in the service are controlled by no proper regulations and no proper supervision.
6. The duties are often menial, the last order on this subject requiring doctors to attend the branding of deserters.

7. Medical officers must serve twenty-five years for a miserable pension of 16s. per diem!
8. The first fifteen years of service carries only from 10s. to 15s. a day as daily pay!
9. The medical officer is on duty every day; a fighting officer or private perhaps once a week.
10. The dress nominally distinctive of your office is in reality designedly made to mark a *supposed* inferiority.
11. Should your duties bring you into collision with your colonel, you may expect no support from the Department.
12. Talents, zeal, industry, and progression have never yet been acknowledged and rewarded.
13. Foreign service, field service, and service during epidemics meet with no adequate promotion.
14. The attainment of the higher grades is regulated, not by fixed laws, but by the doctrine of chance: the office of "deputy-inspector" has been satirically characterized as "a snug berth for favourites."
15. The disease and mortality amongst army medical officers are great.
16. Sick furlough is regulated on the principle of regaining health in three months, after years and years spent in unhealthy climates.
17. The Medical Warrant of 1858 is a delusion; the only boon, the twenty years' retirement, was purposely omitted.
18. In every campaign the Medical Service has been despised or deserted on the field, and left (as at the relief of Lucknow) to the attacks of the enemy.
19. The pay is totally inadequate to the duties required.
20. The chances of your surviving twenty-five years is remotely small: you return to civil life, if you do survive, a friendless outcast—in all human probability in broken health.

I am, Sir, your obedient servant,

February, 1863. VENI VIDI.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on the 26th ult.:—

Armstrong, James Hunter, Harmer-street, Gravesend.
Nash, Geo Branston Valentine, Royal Infirmary, Liverpool.
Slade, Robert, Poole, Dorset.

The following gentleman also on the same day passed his first examination:—

Wicksteed, Francis W. S., St. Bartholomew's Hospital.

THE ORIGIN OF COW-POX.—The Imperial Academy of Medicine of Paris has appointed a commission to inquire into the origin of vaccine.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—There will be no meeting of this Society on the 10th inst., in consequence of the marriage of his Royal Highness the Prince of Wales.

ARMY ESTIMATES: MEDICAL DEPARTMENT.—The total amount voted in 1862 for the medical establishment services and supplies in 1862 was £327,311. In the present year the vote is to be for £255,993.

THE ODONTOLOGICAL SOCIETY.—The united bodies, "The Odontological Society of London" and "The College of Dentists," have adopted the title of "The Odontological Society of Great Britain."

CITY DISPENSARY.—At the recent anniversary, it was stated by the treasurer, Thomas Hankey, Esq., that 12,000 cases were annually treated at this dispensary at an average cost of not more than sixpence per head.

CITY ORTHOPEDIC HOSPITAL, HATTON-GARDEN.—During the past year 987 persons afflicted with various deformities were received. From its commencement, nearly 10,000 persons have been relieved.

TEETHING.—During ten years ending 1860, the deaths of no fewer than 6703 children were registered as having arisen from this cause in London. During the year 1862, the deaths from the same cause numbered 761.

HOSPITAL ILLUMINATIONS.—An Admiralty order has been despatched to Chatham, directing that, amongst other marks of rejoicing on the 10th of March, the naval hospitals are to be illuminated.

MUNIFICENT LEGACY.—The Marquis of Lansdowne, the late Lord-Lieutenant of the county of Wilts, has, by a codicil to his will, bequeathed the handsome sum of £3000, free of legacy duty, to the Salisbury Infirmary.

THE CORONERSHIP FOR RUTLAND.—Mr. John Thomas Keal, M.R.C.S.Eng., has formally announced his withdrawal as a candidate for the above office; and it is therefore probable that his brother, Mr. Wm. Keal, will be elected without opposition.

STILL-BORN CHILDREN.—The number of still born children in 1000 cases under the care of Dr. Lawrence, of Montrose, according to his recent report, was 45. Of these 20 occurred in 220 primiparous births, or 1 in 11; and 25 in 780 non primiparous births, or 1 in 31·2.

CURARA IN HYDROPHOBIA.—The Commission appointed at the Milan Hospital for the purpose of testing the value of curara as a remedy for hydrophobia, have reported that it has failed to establish its claims as a remedy.

THE SOCIETY OF LINCOLN'S INN will, on the occasion of the marriage of the Prince of Wales, distribute 400 dinner tickets, at half-a-crown each, to the poor of the neighbourhood; of which 200 will be given to out-patients of King's College Hospital, and 200 to out-patients of the Carey street Dispensary.

ROYAL LONDON OPHTHALMIC HOSPITAL.—In the museum of this hospital a most valuable collection of about 1200 preparations, the result of several years' labour of Dr. Bader, the curator, has just been completed, labelled, and catalogued. During the past year, 15,342 separate cases were attended.

TREATMENT OF A POLISH DOCTOR.—An affray took place at Latachow between the Russians and the insurgent Poles. One man who was wounded having been placed at the door of the village doctor's house, the latter proceeded to dress his wounds. The Russian soldiers rushed on the doctor, tied his hands, and carried him off with them.

ESSEX HALL ASYLUM FOR IDIOTS, NEAR COLCHESTER.—The Committee have decided upon accepting the munificent offer of Sir Samuel Morton Peto, M.P., to sell the Essex Hall estate at one-third of the cost price, about four-fifths of the required amount having been already raised by subscription.

OLDHAM MEDICAL SOCIETY.—A Medical Society has just been formed at Oldham. The office-bearers were elected at a meeting held a few days since, and the necessary preliminaries were taken to establish the Society. It is intended to hold quarterly meetings, and to invite the contribution of papers on Medicine and Surgery.

LOGWOOD AS A DEODORIZING AGENT.—The "American Medical Review" testifies to the value of logwood as a deodorizer for medical purposes. In cancerous diseases of the uterus, in the form of an injection, it is said to be employed with complete success.

THE QUEEN'S COLLEGE, BIRMINGHAM.—The students of Queen's College have been invited to a cold collation by William Sands Cox, Esq., the Dean of the Faculty, in the College hall, on the 10th inst. Several members of the Council have contributed presents of wine and other good cheer towards the festivity. In the evening the College will be brilliantly illuminated.

CONVERSAZIONE OF THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—On Friday, February 27th, a conversazione of the Royal College of Surgeons was held in the Surgeons' Hall, Nicolson-street. There were upwards of 200 gentlemen present, embracing representatives of the medical department of the army and navy, of the universities, and gentlemen from all parts of Scotland. The President, Dr. Newbigging, received the visitors in the library, after which they adjourned to the hall, where Professor Syme related the history of a case of excision of the scapula, and a lecture on the present aspect of the doctrine of cellular pathology was given by Mr. William Turner, M.B.

The President, in opening the proceedings, remarked that no name was better known or more honoured in the science of surgery than that of Professor Syme, while Mr. Turner had already reached a high position in the medical school of Edinburgh as an original observer, and had gained a high reputation for minute and accurate scientific knowledge. Professor Syme then gave a description of a case in which, in November last, he had removed the shoulder-joint along with the whole shoulder-blade on account of a tumour growing from the bone.

The operation had been of a formidable character, but his patient had recovered without a bad symptom, and three weeks afterwards was seen writing a letter with the hand of the side operated on. The patient was introduced to the meeting, and presented the appearance of a man in vigorous health. He raised the hand of the side operated on to his mouth, lifted with it a heavy mahogany chair, and some amusement was excited by the ease with which he applied the back of the elbow to his chin, in illustration of the increased flexibility of the limb.

A lecture "On the Present Aspect of the Doctrine of Cellular Pathology" was given by William Turner, M.B. Lond., F.R.C.S.E., Senior Demonstrator of Anatomy in the University. After a short sketch of the chief theories entertained by physiologists respecting the mode of origin of cells in the normal development of the textures, the lecturer proceeded to the consideration of the sources whence the new cells produced in pathological processes arise. The lecture was, however, more particularly devoted to an inquiry into the origin of the corpuscles of pus, cancer, and tubercle, but more especially those of pus, in the connective tissue, bone, cartilage, muscle, nerves, mucous and serous membranes, skin, and the kidney. The insufficiency of the hypothesis that these cells arise by any process of precipitation or aggregation of granules and visible molecules in an exudation poured out from the blood, was pointed out, and their origin was traced to the changes in the pre-existing cells and nuclei of the textures in which they occur.

Dr. Cragie, President of the Royal College of Physicians, moved, and Dr. Currie seconded, a vote of thanks to Professor Syme and Mr. Turner.

After partaking of refreshments, the meeting separated.

THE LEVEE.—The following gentlemen were presented to his Royal Highness the Prince of Wales, in addition to those published in this journal last week, and making the large number of ninety-three loyal members of our profession who paid their respects to the Prince on that occasion—viz., Dr. Acland, Dr. Anderson, Dr. Butler, Dr. T. K. Chambers, Dr. W. Dick, Dr. C. J. Foster, Dr. Gallagher, Dr. Francis Hawkins, Dr. E. Hilditch, Dr. William Jenner, Dr. R. O'Shaughnessy, Dr. G. C. Millar, Dr. J. M. Minter, Dr. G. E. Paget, Dr. E. Phillips, Dr. Sieveking, Dr. G. Sykes, Dr. Forbes Watson, Dr. J. Grant Wilson, Mr. J. M. Arnott, Assistant-Surgeon Agnis, Surgeon H. Baillie, Mr. William Bowman, Mr. William Coulson, Assistant-Surgeon J. C. Corbyn, Sir Daniel Cooper, Mr. C. F. Du Pasquier, Surgeon W. C. B. Eatwell, Surgeon R. Gilborne, Surgeon-Major A. Grant, Mr. C. H. Hawkins, Surgeon-Major Jee, Surgeon H. Martin, Mr. James Paget, Mr. George Pollock, Mr. R. Quain, Mr. Edwin Saunders, Deputy Inspector-General C. J. Smith, Assist.-Surgeon R. Turner, Assist.-Surgeon E. J. Vivian, Surgeon Young, and Surgeon-Major Wyatt.

KING'S COLLEGE.—At a meeting of the Council of this institution on Friday last, Dr. Priestley, of the Middlesex Hospital, was elected Professor of Midwifery and Diseases of Women and Children, in the vacancy occasioned by the resignation of Dr. Arthur Farre.

THE NIGHTINGALE FUND.—Sir Harry Verney, in a letter to *The Times*, says that the "Nightingale Fund" has nothing to do with the "Crimean Fund." It was subscribed and given to Miss Nightingale as a personal testimonial. She refused, however, to accept it, except under a deed placing it in the hands of trustees for the training of nurses. A council was named for its direction, and she only reserved to herself the power of advice. The proceeds were invested in £48,000 Reduced Annuities, £1000 Consols, and £200 South Australian Bonds. The net income is £1426. Two thirds of this are spent in the maintenance and instruction in nursing of probationers at St. Thomas's Hospital, the probationers engaging to take service in public hospitals or infirmaries. The remaining third is spent at King's College Hospital for the maintenance and instruction of midwifery nurses, the want of whom is much felt in the villages of England. The trustees are Lord Monteagle, Mr. R. M. Milnes, M.P., Mr. C. H. Bracebridge, and Mr. E. Marjoribanks, jun. The acting committee of the council consist of Sir Joshua Jebb, K.C.B., Sir Harry Verney, M.P., Sir John M'Neil, K.C.B., Mr. William Bowman, Mr. John Forbes Clark, and Mr. William Spottiswoode, F.R.S.

HOSPITAL AND HOME FOR INCURABLES.—An agreement has been entered into by the trustees of this charity for the purchase of the building of the British Orphan Asylum, at Clapham Rise. It will be rendered capable of containing 120 beds, and will be opened during the month of May next. The sum of £4000 will be required to pay for lease, furniture, &c. Mr. Charles Hood, one of the trustees, has made the liberal promise of an annual subscription of £300, in addition to a donation of £500 already given.

AN IMPOSTOR has recently visited several towns in the country, and so successfully feigned illness as to obtain in many cases contributions to a considerable amount. At Stroud, the medical attendant pronounced her a corpse, and recommended her removal to the deadhouse. She revived, however, and on repeating the imposture at Wolverhampton was apprehended and sentenced to three months' imprisonment.

HUNGERFORD UNION.—The Board of Guardians, on Wednesday last, received with much regret the resignation of Dr. John Lidderdale, of Kintbury, the friends and medical advisers of that gentleman having urged him to take that step, on the ground that his health has for some time past been giving way under the great exertion of Dr. Lidderdale's Union, combined with a very large country practice. The Board unanimously passed a resolution expressing their extreme regret at the severance, from such a cause, between themselves and a gentleman who has been in office since the formation of the Union, and with whom, during that long period there never had been a misunderstanding or the smallest complaint, but whose duties had always been performed with great credit to himself, and benefit to the poor entrusted to his care.—*Reading Mercury.*

ODONTOLOGICAL SOCIETY.—At the monthly meeting of this Society held on the 2nd ult., Samuel Cartwright, jun., Esq., F.R.C.S., president, in the chair, a paper was read by W. A. N. Catlin, Esq., F.R.C.S. The author commenced by a comparison of morbid conditions of the teeth which have in his experience given rise to neuralgia with analogous pathological conditions in other organs, as well as with conditions not strictly analogous, but in which local disease had been shown to have had an etiological relation with neuralgia. He discussed briefly the probable causes of the variety which everyone knows to occur in the degree of pain suffered by different individuals under circumstances of local disease apparently very similar, referring it to variety in temperament, size of nerves, &c.; and then passed on to the main topic—namely, an inquiry as to how far neuralgia due to morbid condition of the teeth may be distinguished in practice from that dependent upon constitutional causes or local mischief elsewhere. The conclusion arrived at was, that, as in all other questions of difficult diagnosis, the surgeon must carefully examine not only the local condition of those organs and parts of the body most likely to originate the neuralgia, but into the general constitutional condition of his patient, and, weighing carefully the facts he ascertains, exercise his judgment in determining the proper conclusions to be arrived at. Before condemning a tooth as the cause of a local neuralgia, it was thus often proper to strive after the removal of other causes of reflex irritation and the improvement of the general health. At the same time, the author strongly deprecated the prevalent practice of retaining diseased teeth in the mouth, to the sacrifice of health and comfort, after they had become useless for mastication or appearance. The paper was illustrated by a large number of interesting cases which had occurred in the practice of the author, some of them being cited to show that the symptoms of intermittent or regular paroxysms mainly relied upon by some authors in their diagnosis of constitutional neuralgia frequently attend local neuralgia in patients of shattered health. The author recommended stimulants in full doses as an antidote to nervous shock, and as the best remedy for the neuralgia which sometimes succeeds dental operations. An interesting case was recorded in which deafness was cured one hour after the extraction of a tooth.

M. DESORMEAUX'S ENDOSCOPE.—Now that the laryngoscope allows us to examine the interior of the thyroid box, and even to spy the bifurcation of the bronchi, we are prepared for the invention of instruments which will lay bare to the eye such canals as the urethra, the rectum, or uterus. M. Desormeaux, Surgeon to the Necker Hospital of Paris, has used for some ten years past a urethroscope which has very nicely answered the purpose, after having been gradually improved and brought nearer to perfection. The *Gazette des Hôpitaux* of the 14th instant states that strictures have been clearly seen with the instrument, which consists of a tube containing a metallic mirror, pierced in the centre, and placed at an angle of forty-five degrees with the axis of the instrument. The tube

ends in a piece which is intended to be connected with the catheters introduced either into the urethra, the nasal fossæ, the pharynx, or any deep canal. The opposite end of the tube is connected with a diaphragm pierced in the centre like the mirror. At right angles with this tube, a second one is fixed, in which a gas lamp is placed. The light of this lamp, reflected by a concave reflector, falls on the slanting mirror, which latter directs it upon the region to be examined. A lens may also be used to cause the rays of light to converge on the object to be viewed. Some nicety is required in the handling of the instrument, and a certain amount of practice indispensable; but the instrument bids fair to turn out very useful. The catheters are open at the side, to allow of the introduction of sponges, &c.

FORT PITT AS A GENERAL HOSPITAL.—The entire staff connected with the Royal Artillery and Royal Engineer Hospitals at Brompton, together with the patients and attendants vacated the hospitals last Saturday afternoon, and took possession of Fort Pitt Hospital, which will in future be used as a general hospital for the entire garrison on the removal of the Army Medical School and staff to Netley Hospital. A portion of the hospital hitherto used at Brompton Barracks is still to be retained for the purpose of an hospital, in which the sick troops will be received and inspected previous to their removal to Fort Pitt. The entire cost of re-appropriating Fort Pitt for this purpose is £1000. The cost of the hospital for the wives and children of the troops in garrison with other buildings is £3000.

MEDICAL VACANCIES.

Middlesex Hospital—Lecturer on Midwifery.
St. Pancras and Northern Dispensary—Honorary Surgeon.

MEDICAL APPOINTMENTS.

F. ALLDAY, M.R.C.S.E., has been appointed Medical Officer of the Merthyr Tydvil Union Workhouse, Glamorganshire, vice J. W. Jones, M.R.C.S.E., resigned.

WM. ANDERSON, M.D., has been appointed Resident Physician and Medical Tutor to the Birmingham General Hospital, vice Jas. Laidlaw Maxwell, M.D., resigned.

S. DUKE, M.D., has been appointed House-Surgeon to the Great Northern Hospital, King's-cross, vice Collins Curtis, M.R.C.S.E., resigned.

W. A. ELLISTON, M.D., has been appointed Medical Officer to the Claydon District of the Bosmere and Claydon Union, Suffolk, vice W. H. Meadows, M.R.C.S.E., resigned.

H. FALCONER, M.D., has been elected Foreign Secretary of the Geological Society for the ensuing year.

J. FENTON, F.R.C.S.E., has been appointed Surgeon to the South Division of the Liverpool Constabulary Force, vice J. Cooper, M.R.C.S.E., deceased.

GRIFFITH H. GRIFFITHS, M.D., has been elected Medical Officer and Public Vaccinator for District No. 4 of the Church Stretton Union, Salop, vice C. Mott, M.R.C.S.E., deceased.

J. HAAST, M.D., has been elected a Fellow of the Geological Society.

S. HAMMOND, L.R.C.P.Ed., has been appointed Medical Officer to District No. 1 of the Midhurst Union, Sussex, vice J. Mulreany, M.D., resigned.

JAMES HOGG, M.R.C.S.E., has been appointed Surgeon-Oculist to the Royal Masonic Schools for Girls and Boys.

J. JONES, M.R.C.S.E., has been appointed House-Surgeon and Secretary to the Isle of Wight Royal Infirmary, vice J. J. Cook, L.F.P.S. Glas., resigned.

F. KELLY, M.R.C.S.E., has been elected Medical Officer to the South District of the West London Union, vice E. Digby, M.R.C.S.E., resigned.

S. KNAGGS, M.R.C.S.E., has been elected Surgeon to the Huddersfield and Upper Agbrigg Infirmary.

R. LAYCOCK, M.R.C.S.E., has been appointed Medical Officer of District No. 1 and the Workhouse of the Bramley Union, Yorkshire.

J. T. MORRIS, M.D., has been appointed Medical Officer of the Heyford District of the Bicester Union, Oxfordshire, vice T. Wm. Turner, M.R.C.S.E., deceased.

R. H. NEWETT, L.R.C.S.Ed., has been elected Resident Surgeon and Compounder to the Belfast Union Workhouse, vice H. P. Rea, M.D., elected to the Smithfield District of the same Union.

H. W. PRIESTMAN NEWTON has been appointed House-Surgeon and Dispenser to the Chesterfield and North Derbyshire Hospital, vice Rowland Hills, whose appointment has expired.

J. F. OLLARD, M.R.C.S.E., has been appointed one of the Honorary Medical Officers to the Isle of Wight Royal Infirmary.

J. H. PARK, M.D., has been re-elected Medical Officer for the ensuing year to the Parish of Monifieth.

BROOME PINNIGER, M.R.C.S.E., has been appointed one of the Honorary Medical Officers to the Isle of Wight Royal Infirmary.

J. ROBINSON POPE, M.R.C.S.E., has been elected Surgeon to the East Sussex, Hastings, and St. Leonard's Infirmary, vice J. Savery, M.D., resigned.

G. W. RHODES, M.R.C.S.E., has been elected Surgeon to the Huddersfield and Upper Agbrigg Infirmary.

P. C. SHEPHEARD, M.R.C.S.E., has been appointed Assistant Medical Officer to the Three Counties Asylum, Stotfold, Baldock, vice W. Rhys Williams, M.D., appointed Resident Apothecary to the Royal Bethlehem Hospital, Lambeth.

F. SWANSWICK, Member of the Pharmaceutical Society, has been appointed Dispenser to the Charing-cross Hospital, vice W. H. Short, resigned.

H. SWIFT, M.R.C.S.E., has been appointed Surgeon to the North Division of the Liverpool Constabulary Force, vice Cooper, deceased.

J. V. L. WESTMACOTT, M.R.C.S.E., has been appointed Medical Officer for the Ardwick District of the Chorlton Union, Lancashire, vice J. M. Kirkman, L.R.C.S.E., resigned.

C. C. WIMBERLEY, M.D., has been elected Medical Officer and Public Vaccinator for the Bedworth District of the Polesbill Union, Warwickshire, vice C. J. Herbert, M.R.C.S.E., whose appointment has expired.

J. WITHAM, of St. George's Hospital, has been appointed House-Surgeon to the Male Lock Hospital, Dean-street, Soho, vice John Wilkins Williams, M.R.C.S.E., whose term of appointment has expired.

J. YATES, M.R.C.S.E., has been appointed Medical Officer for the Newcastle District and the Workhouse of the Newcastle-under-Lyme Union, Staffordshire, vice J. R. Lansdown, L.R.C.P.Ed., resigned.

MILITARY AND NAVAL MEDICAL APPOINTMENTS.

R. F. ANDREWS, L.F.P.S. Glas., Staff Assist.-Surg. Army, has been appointed Staff Surgeon, vice W. Snell, appointed to the 90th Foot.

W. E. CAIRD, Assist.-Surg. 12th Native Infantry Indian Service, has been appointed Garrison Assist.-Surg., Delhi, in addition to his other duties, vice Assist.-Surg. W. H. Muschamp, proceeding to England with invalids.

C. CAMERON, Assist.-Surg. Indian Service, doing duty with the 79th Highlanders, has been appointed to the 21st Hussars.

J. A. P. COLLES, M.D., Assist.-Surg. C Battery Royal Horse Brigade Indian Army, has been appointed to the medical charge of Detachments of the 79th and 93rd Highlanders, 37th Native Infantry, and 11th Bengal Cavalry at Chumkunnie.

S. DELPRATT, Civil Assist.-Surg. Indian Service, has been appointed to the medical charge of A Battery 14th Brigade Royal Artillery.

J. FAWCUS, Assist.-Surg. Bengal Service, has been appointed to the temporary medical charge of the 16th Native Infantry.

G. T. GALBRAITH, M.D., from the 83rd Foot, has been appointed Staff Surg.-Major, vice Staff Surgeon R. M'Nab, who exchanges.

J. B. HAMILTON, M.B., Assist.-Surg. 3rd West India Regiment, has been appointed Staff Assist.-Surg., vice W. Chalmers, deceased.

A. P. HOLMES, M.D., Assist.-Surg. Indian Service, has been reappointed to No. 4 Battery 24th Brigade Royal Artillery, and directed to afford medical aid to Detachments of the 93rd Highlanders in Cantonments and the Fort, Peshawur, and to the families of that Regiment.

M. H. LACKERSTEEN, M.D., Assist.-Surg. Indian Service, has passed his examination and obtained a certificate of "high proficiency" in Bengalee.

R. M'NAB, M.D., Staff Surgeon Army, has been appointed Surgeon to the 83rd Foot, vice Surg.-Major G. T. Galbraith, M.D., who exchanges.

A. C. MAINGAY, M.D., Assist.-Surg. 22nd Native Infantry Bengal Service, has been appointed to the medical charge of the Staff of the Station, Buntheera, in addition to other duties, vice Assist.-Surg. J. N. Shipway; and to the medical charge of the Left Wing of the 15th Native Infantry, in addition to his other duties, vice Assist.-Surg. W. Venour.

J. NIVEN, M.D., Surg. R.N. Dec, 23rd, 1850, has been appointed to the "Pembroke."

R. O'CONOR, Bengal Service, has been appointed to officiate as Medical Officer of Nowgong.

R. H. PERKINS, Assist.-Surg. Bengal Service, has been appointed to the 28th Native Infantry.

F. J. PETTINGAL, Assist.-Surg. Indian Army, attached to the 97th Foot, has been appointed to the medical charge of a Wing of the 30th Native Infantry, in addition to his other duties.

C. RICKETTS, Assist.-Surg. 7th Royal Fusiliers, has been appointed to the medical charge of the Ferozepore Arsenal Establishment, in addition to his other duties.

C. C. RUTHERFORD, from the 99th Foot, has been appointed Staff Surgeon, vice Usher W. Evans, M.D., appointed to the 61st Foot.

G. WATSON, Assist.-Surg. 5th Native Light Infantry Bengal Army, has been appointed to the medical charge of the Medical Staff of the Station, Jalundur, vice Assist.-Surg. E. M'Grath, of the 94th Foot, proceeding to England with invalids.

Births, Marriages, and Deaths.

BIRTHS.

On the 23rd ult., at North Curry, Somersetshire, the wife of Thos. Plowman, M.R.C.S.E., of a son.

On the 24th ult., at Anglesey, Gosport, Hants, the wife of Dr. Burton, Surgeon R.N., of a son.

On the 25th ult., at the Pigeon-house Fort, Dublin, the wife of Wm. Holmes, M.R.C.S.E., Staff Assist.-Surg. Army, of a daughter.

On the 27th ult., at Upper Phillimore-place, Kensington, the wife of T. Orme Dudfield, M.D., of a son.

On the 28th ult., at Pelham House, Poole, Dorsetshire, the wife of A. Crabb, M.D., of a daughter.

On the 1st inst., at Lever-street, Manchester, the wife of J. Ogden Fletcher, M.D., of a daughter.

On the 2nd inst., at Albert-square, Commercial-road East, the wife of J. Stillwell Hawkins, M.R.C.S.E., of a son.

MARRIAGES.

On the 3rd of Dec., at Horsham, Australia, A. Macdonald, M.D., to Christina Thoms, second daughter of the late G. Langlands, Esq., of St. Andrews, Scotland.

On the 20th of Jan., at Toronto, Upper Canada, J. Burch, M.D., to Miss Esther Fowler.

On the 25th ult., at Newry, T. D. Finucane, Surgeon, of Blackrock, Co. Dublin, to Ada Emily, daughter of the late Rev. A. S. Elsmere, M.A.

DEATHS.

Lately, R. Haywood, M.R.C.S.E., of Locust Cottage, Landport, Portsea, retired Surgeon R.N.

On the 24th of Jan., at Hamilton, Upper Canada, J. I. Dallas, M.D., aged 46.

On the 14th ult., John Mitchell, L.F.P.S. Glas., of Kilmarnock, aged 46.

On the 22nd ult., at Northallerton, Thos. Newton, M.R.C.S.E., of Knayton, Thirsk, Yorkshire, aged 60.

On the 22nd ult., at Bridgman House, Teddington, J. Borland, M.D., Inspector-General of Army Hospitals, aged 88.

On the 24th ult., at Lymm, Cheshire, C. G. O'Brien, L.F.P.S. Glas., late of Salford, Manchester, aged 70.
On the 24th ult., at Pimlico, R. Baist, Dentist, aged 54.
On the 24th ult., at Elm-grove, Southsea, J. Campbell, M.D., Surgeon R.N., aged 69.
On the 25th ult., at Portsmouth, F. W. Houghton, M.R.C.S.E., aged 27.
On the 26th ult., at Temple-row, Birmingham, Thos. Williams, M.R.C.S.E., aged 53.
On the 26th ult., at Richmond-road, Dalston, G. Medcalf, M.R.C.S.E., aged 33.
On the 1st inst., at Richmond Lodge, Trinity, Edinburgh, Dr. J. Walker.
On the 1st inst., at Blacket-place, Edinburgh, W. Bogie, M.D., of the Bengal Medical Service.
On the 1st inst., at Crown-street, Liverpool, T. M'Nicoll, M.R.C.S.E., late Editor of the "Quarterly Review," aged 41.
On the 2nd inst., at India-street, Edinburgh, J. Graham Stuart, M.D., H.E.I. Company's Service, aged 65.

BOOKS ETC. RECEIVED.

Dr. M'Clintock on the Diseases of Women.
Dr. Tuckwell on Effusion of Blood in the Neighbourhood of the Uterus.
Mr. Watts's Dictionary of Chemistry. Part I.
Mr. Tyndall on Heat as a Mode of Motion.
Dr. J. O'Reilly on Strangulated Hernia.
The Technologist.
The Intellectual Observer.
The Sculptor's Journal.
Art Journal.

Medical Diary of the Week.

MONDAY, MARCH 9.

LOCK HOSPITAL, Dean-street, Soho.—Clinical Demonstrations and Operations, 1 P.M.
ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM.—Operations, 1½ P.M.
METROPOLITAN FREE HOSPITAL. — Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. Huxley, "On the Structure and Development of the Vertebrate Skeleton."
MEDICAL SOCIETY OF LONDON.—8½ P.M. Clinical Discussion.—Dr. Thudichum, "On Cancer of the Pancreas;" and "On Purulent Disease of the Kidney, complicated with Disease of the Bladder;" and other communications.

TUESDAY, MARCH 10.

GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION. — 3 P.M. Prof. Marshall, "On Animal Mechanics."

WEDNESDAY, MAR. 11

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M.
ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Croonian Lectures: Dr. Risdon Bennett, "On some Points connected with Bronchitis, and its Results."
HUNTERIAN SOCIETY. — 8 P.M. Dr. Fowler, "On the Autopsy of a Case of Artificial Anus in the Groin, successfully treated."

THURSDAY, MARCH 12

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 1 P.M.
LONDON HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 1½ P.M.
GREAT NORTHERN HOSPITAL, KING'S CROSS.—Operations, 2 P.M.
LONDON SURGICAL HOME.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL. — Operations, 2 P.M.
ROYAL INSTITUTION. — 3 P.M. Dr. E. Frankland, "On Chemical Affinity."
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC. — 4 P.M. Dr. Brown-Séquard, "On the Diagnosis and Treatment of the Various Forms of Paralysis and Epilepsy."
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. Huxley, "On the Structure and Development of the Vertebrate Skeleton."

FRIDAY, MARCH 13.

WESTMINSTER OPHTHALMIC HOSPITAL. — Operations, 1½ P.M.
ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Lumleian Lectures: Dr. Chambers: "Formation of Mucus and Pus."
ROYAL INSTITUTION.—8 P.M. Dr. Gladstone, "On Fog Signals."

SATURDAY, MARCH 14

ST. THOMAS'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION. — 3 P.M. Prof. Max Müller, "On the Science of Language."
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. Huxley, "On the Structure and Development of the Vertebrate Skeleton."

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THE LANCET *may be obtained from every respectable Bookseller or Newsman in the World.*

To Correspondents.

R. L.—The term "teigne" is applied by the French to the Porrigo favosa, P. scutulata, and P. decalvans of Bateman and Willan. The Board of Health of Paris is at present instituting extended inquiries into the natural history of these contagious maladies.

A Constant Reader, (Beverley.)—There must have been some mistake in the matter. It would be well to communicate with the Secretary.

PLACENTA PRÆVIA AND ARTIFICIAL DELIVERY.

To the Editor of THE LANCET.

SIR,—Were it not important to determine the question whether the uterus should be artificially emptied during the atony which sometimes follows the abstraction of a presenting placenta, it would be unnecessary to prolong the correspondence of Dr. Ellis and myself. While I admit the procedure of Dr. Ellis, as related in his case, to have been perfectly orthodox practice before Dr. Simpson discovered, and Dr. Barnes and others confirmed, the fact that on the withdrawal of the placenta hæmorrhage ceases, I deny the necessity of now incurring the risk of sudden death by artificial delivery under a state of uterine inertia induced by hæmorrhage; for although some have passed through the ordeal with narrow escape, it is no argument against establishing a more uniformly safe practice.

The continuance, or the cessation, of the hæmorrhage is the salient point for consideration. Dr. Ellis says (and I respect his conscientious opinion), "that when the pelvic cavity is capacious, the os dilated and dilatable, the placenta is removed, and the membranes are intact, and no pains exist,—these are favourable conditions for turning and delivery." I think exactly the reverse, and that, under those circumstances, the only justifiable manual interference is rupturing the membranes. Reparation of the blood by food, and fortifying the nervous system by opium against the reflex action of uterine shock from too rapid delivery, are the scientific points of procedure. The dread of a patient sinking undelivered under the condition related is altogether ideal. I would wait not only "six hours," but twenty-four or more hours for the return of uterine action, administering in the interim all restorative means, before using further manual interference.

I know a surgeon who retired from the profession twenty years ago from chagrin at having lost four patients in close succession under the effects of uterine hæmorrhage, which induced him to turn and forcibly deliver; and in these days of medical persecution, were such ill-luck to attend anyone, it would not be without the danger of a charge of manslaughter, for which evidence might readily be obtained.

Yours obediently,
Liverpool, February, 1863. JOHN TAYLOR, M.R.C.S. Eng.

Mr. G. R. Vivian.—We referred to the profession generally, and not to the exceptional members of it. We reiterate the opinion we expressed, that the appointment would give satisfaction to the profession.

P. C. H.—No claim could be established against the master, unless a specific promise was made on his part, or unless the surgeon attended at his request.

TREATMENT OF STRUMA.

To the Editor of THE LANCET.

SIR,—Would you oblige a constant reader of your valuable serial by calling the attention of your numerous readers to the difficulty of removing scrofulous enlargement of absorbent glands. In many cases they resist every kind of medicine usually given, together with sea air, nutritious diet, &c. &c. This form of struma occurring almost daily to each member of the profession, I cannot doubt but the readers of THE LANCET will take much interest in the ventilation of it.

I am, Sir, yours obediently,
Hanley, Stoke-upon-Trent, March, 1863. M.R.C.S.

Beta must not read too much and attend the wards too little. Let him reverse his present procedure, and he will have more confidence both at his examinations and his entrance upon the emergencies of practice. In Medicine, reading is all very well, but observation and reflection are better.

THE ORCHIDS: SALEP.

To the Editor of THE LANCET.

SIR,—The nature and properties of any and every substance used as human food are so closely connected with our measures for the treatment of diseases, that I trust the subject of this communication will be found interesting to your readers.

The tubers of several species of the natural family of plants—Orchidaceæ—were formerly much employed and highly esteemed as an article of diet, under the designation salep or saloop. Of late salep has fallen into neglect. I looked in vain for specimens of the tubers of orchids among the numerous dietetic substances in the Great Exhibition. In a recent number of the *Pharmaceutical Journal* the subject is alluded to in a manner implying that it is very little known to chemists and druggists. A sufficient amount of salep, however, is imported from the Continent to prove that its use still lingers among some classes.

The remarkable and popular work of Mr. C. Darwin, on the "Fertilization of the British Orchids" will most probably induce many persons, and among them country medical practitioners, who pursue gardening as a recreation, to cultivate many species of this order of plants for the purpose of verifying or extending his observations, and thus a favourable opportunity will be afforded for testing the value of the tubers as an article of diet.

These tubers, as they are imported, present a remarkable diversity of shape and appearance, depending on the species whence they are derived. From India we have them as large as walnuts, and much the same shape and appearance. Those brought from Germany are like a three-fanged tooth, and much smaller. They all agree in being of a hard, horny consistence, and when reduced to powder, partially soluble in boiling water, forming a thick glutinous paste. In most English works they are said to consist of bassorin, a substance closely resembling gum tragacanth, and to be of little account as nourishment. On the other hand, in India they are held to be highly nutritious, and a very high price is paid for the larger tubers, as much as a guinea a pound, under the idea that they are easily digestible and restorative of weakly and delicate persons. This impression appears to be justified by the discovery made in France that the tubers of the orchids are rich in nitrogen. I have myself verified this observation, and hence they must at any rate be entitled to a renewed trial as an article of diet. Of some species the tubers appear to be destitute of starch; in others there is a minute quantity of it. In what state or in combination with what elements the nitrogen exists I am not able to say. The subject is worthy of investigation.

It must not be supposed that should the tubers be found of any value, the price would preclude their becoming of any importance. Mr. Darwin states that the fecundity of these plants is enormous. With a careful cultivation they could be made to produce an amount of tubers, and therefore food, greater for a given amount of soil than any other; and I cannot avoid the inference from these two facts that orchids may be profitably cultivated, and that they will, when duly appreciated, be brought to market at a very low price.

Yours obediently,

February, 1863. X.

Glaucoma.—1. The second practitioner called in should have communicated with the first.—2. It does not appear from the statement that an inquest was necessary.

W. P., (London, W.)—We are sorry that it should be so; but we have spoken our mind so often and so urgently that we cannot refer to the matter further at present than to say that we agree with our correspondent in thinking "the advice gratis system to be derogatory to the profession."

THE CHARGE OF INVALID TROOPS BY CIVIL SURGEONS.

To the Editor of THE LANCET.

SIR,—May I trespass upon your space to relate a few facts, the knowledge of which may serve to warn those members of our profession who may have, as civil surgeons, to take charge of invalid troops on passage.

In February, 1862, I was surgeon to the ship *Donald M'Kay*, having signed articles for the voyage out and home, and we were then at Melbourne, homeward bound. The military authorities advertised for tenders for the conveyance to England of a number of invalid soldiers, their wives and families, and the agents for the owners replied to the advertisement, and obtained the contract. A board of officers examined and approved of the vessel and appliances, and requested to see my diplomas. To my inquiries about remuneration, they replied that they had no power to make any arrangement with me; but one of the three, Dr. Sall (the principal medical officer) told me privately that he had never known a case in which the usual remuneration had been refused upon application to the Government. When my diplomas had been examined and approved, I was requested to sign an undertaking to keep certain journals and accounts, to give to the troops my best attention, and deliver them to the principal medical officer at Fort Pitt. Upon these representations I did so; and on the 19th of May, 1862, I delivered my charge to the care of the hospital staff at Fort Pitt, and received certain certificates, which I forwarded on the following day to the Under Secretary of State for War. After the usual delay, I was informed that I ought to apply to the Admiralty. I did so, and after a very considerable time I received for reply an extract from the contract entered into between the owners of the ship and the military authorities, wherein they (the owners) undertook to provide medical attendance for the men. In the meantime, of course, I had received my pay and signed the usual discharge, whereby I am told that I am debarred from any further claim against the ship.

Now, the attendance upon these men was a very great addition to my duties, and a source of great anxiety; and though all the cases were really broken-down constitutions, and many in the last stage of phthisis, yet we lost but one man, and he died from rupture of an aneurism of the aorta.

I will say nothing of the labour involved in keeping all the journals and reports required by the Army Board from its own officers; but if a few of these cases can be thrown upon a surgeon against his will, and without remuneration, there is nothing to prevent these persons from filling their ships with invalids.

I am, Sir, yours, &c.,

Manchester, March, 1863. A CIVIL SURGEON.

Sidcup (Devon) will find ample opportunities for the study of most branches of natural history by passing a couple of summer sessions at the University of Edinburgh. The northern school has always produced some of our best naturalists.

Veritas.—The letter of our correspondent can only be inserted with the addition of his name and address.

M.D. NOW OR AT 40.

To the Editor of THE LANCET.

SIR,—After one has been accustomed to read week after week in your columns letters disputing the value of M.D. and L.R.C.P., the student preparing for either must necessarily have his mind rather disturbed after the following considerations:—If he wish to obtain the degree of M.D., he must, at any University, first take the degrees of M.B. and C.M., (become qualified,) having at least to undergo two or three separate examinations, and a final one for M.D; and if graduating at a Scotch University, he must reside two years. But he has taken his hospital and clinics in London, and paid down the £100 for four years. If he goes to Scotland for two years, of course he must pay over again for hospital and classes. Now, suppose that at last he has done all this, and obtained the M.D. Is this degree superior to the L.R.C.P.? which latter does not give him the power to style himself "doctor" or "surgeon;" and I suppose he could not practise as a pure physician with it, because persons would suppose that he was then a "member," or he might "by act" be making himself appear as such, or else a M.D. If he cannot afford further study, &c., the only plan that remains is to wait until forty, and then try for the M.D. of St. Andrews, and be made "either a physician or a fool."

Now, do not these considerations show that there must hereafter be a great difference between the University M.D. and the L.R.C.P., and do not they assist in making it clear that L.R.C.P.s have no right to the title of Dr. or M.D., unless they are also University men? If otherwise, I would ask what is the good of any student working for his M.D., if afterwards he shall find next door a L.R.C.P. calling himself Dr., and disobeying the College bye-law? I think that one of the best reforms that could be made would be to sweep away the examining powers in Medicine &c. of all Colleges and Universities, and establish in each country—England, Scotland, and Ireland—"a Medical open University." The various Colleges of Physicians and Surgeons would serve as clubs, museums, and meeting-houses for the various Medical and Surgical Societies, &c. It would do much in raising the status of the profession if the public knew that each practitioner had received a University education. Why are clergymen and barristers thought so much of? Simply because they are all supposed to have had University educations and associations.

I am, Sir, yours, &c.,

February, 1863. UNDERGRAD. UNIV. LOND.

HYSTERIA TERMINATING IN APOPLEXY.

To the Editor of THE LANCET.

SIR,—The following case, showing the necessity of caution in prognosis, may prove of interest to your readers:—

On Tuesday, January 6th, Sarah K——, a fine well-grown young woman, nearly sixteen years of age, walked a distance of two miles to my house, and requested my advice in consequence of feeling weak and inadequate to her duties as parlour-maid in a respectable family, with whom she had resided two years. The sounds of the heart and chest were perfectly normal; her condition plump, and presenting no deviation from health, save a slightly anæmic state, to which alone I could attribute the debility complained of. I prescribed for her ammonio-tartrate of iron, in five-grain doses, to be taken thrice daily, and heard no more of the case until called up on Saturday morning, at three A.M., to see her.

I found she had been attacked some hours previously with a sensation of a ball rising in her throat, and a paroxysm of laughing, sobbing, and crying—in fact, with an attack of hysteria. The pulse was 80, small and weak; the face alternately flushed and pale; the lips red; the breathing natural; the pupils obedient to the stimulus of light. On sprinkling her face with water, she brushed off the moisture with her hand, and put back her hair; and on tickling the soles of the feet, retracted the limbs, evincing altogether partial consciousness, although unable to speak. I cannot say that I apprehended any danger. As the feet were cold, I directed a foot-warmer to be applied; gave carbonate of ammonia, with tincture of sumbul and camphor mixture, every four hours, and a dose of warm aperient medicine at once.

Being prevented by a busy day from seeing her as I intended to have done in the afternoon, I was requested at eight A.M. to see her immediately; but before I arrived she had expired. I found at three P.M. she had been attacked with clonic spasms, succeeded by paralysis of the right arm, by stertorous breathing, and a state of profound coma, and that death had ensued about twenty minutes past eight.

Yours truly,

Bishops Waltham, Hants, Feb. 1863. G. H. DOSWELL, L.S.A.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. T. Holmes; Dr. Chambers; Dr. Hughes Bennett; Dr. Wood, Edinburgh; Dr. Dyster; Mr. Hale (with enclosure;) Mr. Vivian, Axbridge; Mr. Wordsworth; Mr. Atien, Rugby; Mr. Harrison, Merthyr; Mr. Radcliffe; Mr. H. Lee; Mr. Wallace, Rathgar; Dr. Blanshard, (with enclosure;) Dr. Davies, Wrexham; Mr. Peel, Stockton, (with enclosure;) Dr. Woodman; Mr. Roberts; Dr. Cooper, Luton, (with enclosure;) Dr. Edwards, Cardiff; Mr. W. Brown, Kings Norton; Dr. Jackson; Dr. Davies, Stafford, (with enclosure;) Mr. Jones, Luddenden, (with enclosure;) Mr. Clough, Bawtry, (with enclosure;) Dr. Liddercale; Dr. Bryan; Dr. Buzzard; Mr. J. Dix, Hull; Mr. Blake, Salesbury, (with enclosure;) Mr. Dewar, Cardiff, (with enclosure;) Mr. Thorley; Mr. T. Watts, Frampton; Messrs. Argles and Co., Maidstone; Dr. Starke, Reading; Dr. Hawkes, (with enclosure;) Mr. Turner, Deddington; Mr. Gould, Chard; Dr. Low, Marsley; Dr. Cowie, Halifax, N.S.; Mr. Wait, Bury; Mr. O'Toole, Colsterworth, (with enclosure;) Mr. J. Crocker, Burnley, (with enclosure;) Mr. Baughan; Mr. H. Kay, Cork, (with enclosure;) Mr. Heyworth, Burton; Mr. Pike; Mr. Pickard, (with enclosure;) Messrs. Sole and Turner; Mr. Playford; Dr. Devenish; Dr. Dudfield; Dr. Waller Lewis; Medicus; Mister; F. C. H.; An Army Medical Officer; L.R.C.P.; Veritas; Royal Institution; T. H., (with enclosure;) Beta; R. T., (with enclosure;) A Constant Reader; M.R.C.S.; A Civil Surgeon; Glaucoma; W. B., (with enclosure;) J. S. H.; A Small Shareholder; &c. &c.